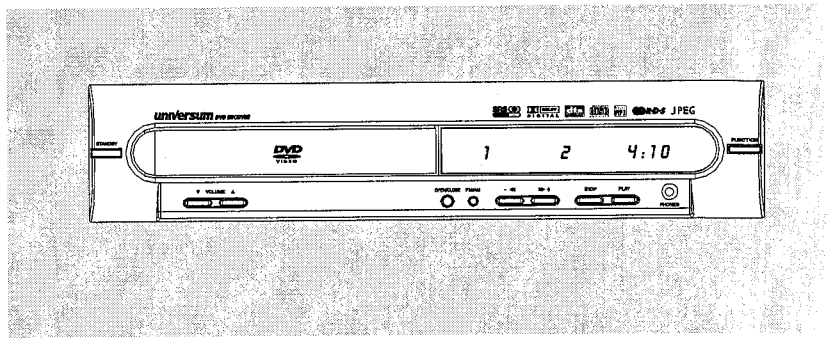
Profectis
Technischer Kundendienst
QUELLE.

Serviceunterlage

Typ/Privileg-Nr.:
DVD-DR1039

Heimkino-System



UTS-Nr.: 999 QUELLE
Best.Nr.: 5012604/01
Ger.Bez.: UNIVERSUM HEIMKINO-SYSTEM

GKz: G GERAET
WGT: 655 HOME CINEMA SYSTEME
Ditec Produktgruppe: 5 AUDIO
Klassierung: DVD DVD-PLAYER
Type/Privileg/Universum.Nr DVD-DR
Herstellertyp HK-SYSTEM DVA 2.1
Beschreibung
VK-Preis: 199.00

Serviceart: 01 PROFECTIS
Garantie fuer Kunden 24 Monate
Sondervereinbarungen: 0 SIEHE SERVICEART

Garantiereparatur 0004063 PROFECTIS GMBH
Sondervereinbarungen: 0 SIEHE SERVICEART

Katalog	Seite
Erst 035 SONDERKATALOGE H/W 2003	0000
Letzt 000 NOCH IM AKTUELLEN KATALOG	0000

Geraete Info:

- Heimkino-System DVA 2.1
- DVD-Receiver mit PLL-Tuner UKW/MW, RDS, 30 Stationsspeicher
- DVD/CD/CD-R/CD-RW/VCD/SVCD/MP3-Wiedergabe
- Dolby Digital und DTS-Ausgang, 2-Kanal Down Mix
- 2 Lautsprecher, 1 passiv Subwoofer
- DSP: Wow/Focus/Trubass-Effekte

Technische Daten:

Fehler:

Nachdruck nicht gestattet
Änderungen vorbehalten

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only. Mains lead must only be changed at a qualified service shop.

Produkt der
Laserklasse 1

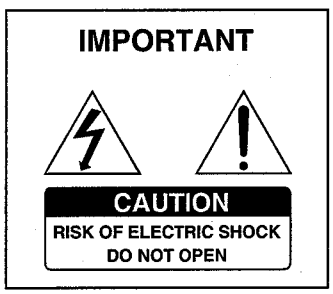
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear panel.

VORSICHT !
UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND DIE SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT DEM STRAHL AUSSETZEN !

This label is located on the Laser protective housing inside the enclosure.

Dear Customer,

Thank you for purchasing our product, before you using it, please read this safety information and precautions contained in the following pages to ensure the safe use of your DVD Player.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "danger voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and servicing instructions.

■ WARNING

To prevent fire or shock hazard, do not expose this product to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and that no object filled with liquids, such as vases, shall be placed on the apparatus.

■ CAUTION

To avoid electrical shock, do not open the cover (or back). Refer servicing to qualified service personnel.

To prevent electric shock match wide bland of plug to wide slot, fully insert.

■ DANGER

This DVD Player uses a visible Laser Beam.

The DVD Player is a class 1 laser product.

To prevent direct exposure laser beam. When the enclosure is opened, visible laser radiation is present , which is harmful to the eye.

Use of control or adjustments or performance of procedures other than those specified herein may result in hazarded radiation exposure.

Do not open the covers and do not repair yourself.

Refer to the qualified personnel for servicing.

IMPORTANT SAFETY INSTRUCTIONS

Failed to meet following precautions may result in damage to DVD Player

Power Sources

- Be sure that the power supply voltage of the area where this unit will be used meets the required voltage. (230V AC, 50Hz)
- Keep the power cord from heating devices.
- Do not pinch the power cord by heavy items.
- Power cord should be routed well.

Environment

- **DO NOT** place the DVD Player
- In an environment prone to extreme temperatures or humidity.
- Near heat source like heat registers, stoves, or other products (including amplifiers) that produce heat.
- Near water - for example, near bath tub, wash bowl kitchen sink, and the like.
- In direct sunlight, heater.
- In a dusty environment.
- In where strong magnetic fields are generated.
- On a surface that is unstable or subject to vibration.

Cleaning

- Unplug this product from the wall outlet before cleaning.

  Do not use liquid cleaners or aerosol cleaners.

  Use a damp cloth for cleaning.

Object and Liquid Entry

- Do not place heavy objects on the DVD Player.
- Do not push objects of any kind into this product.
- Never spill liquid of anything on the product.

Ventilation

- Do not block the DVD Player's ventilation openings.

Overloading

- Do not overload wall outlet, extension cords, or integrated convenience receptacles.

Without using

- When not using in near future, unplug power cord.

CONTENTS

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DISASSEMBLY

< MAIN BODY >

■ Removing the Tray Door (See Fig.1)

[Caution] Tray door should be removed before detaching the DVD set.

1. Eject the disc tray.
2. Lift up the tray door upward.

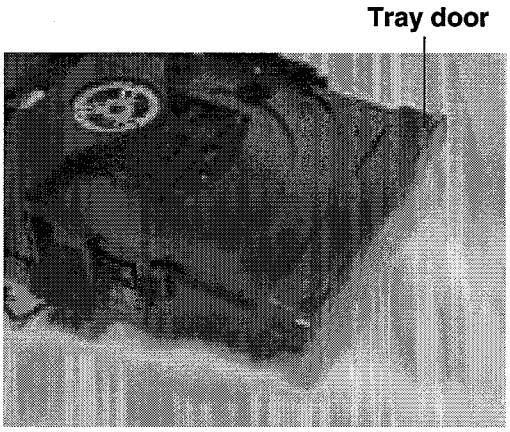


Fig.1

■ Removing two side panel (See Fig.2)

1. Unscrew four screws **A**.
2. Push the side panel backward, than take them out side ward.

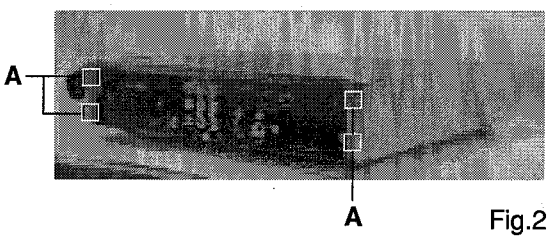


Fig.2

■ Removing the cabinet top (See Fig.3)

1. Unscrew six screws **A**.
2. Lift the cabinet top by holding the two sides of it, while moving it upward and backward.

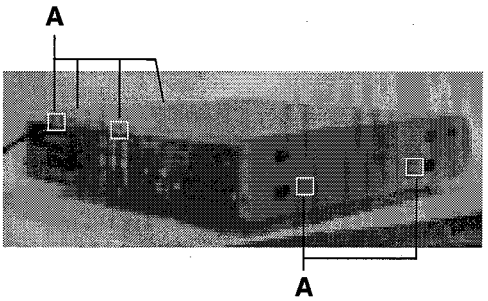


Fig.3

■ Removing the cabinet front (See Fig.4 & 6)

[Caution] The cabinet top should be removed detaching the cabinet front.

1. Remove the rubber foot. (See Fig.4 & 5)
2. Remove two screws **B** & **D**. (See Fig.4 & 5)
3. Remove two screws **C** & **E**. (See Fig.4 & 5)
4. Remove the screw **F**. (See Fig.6)

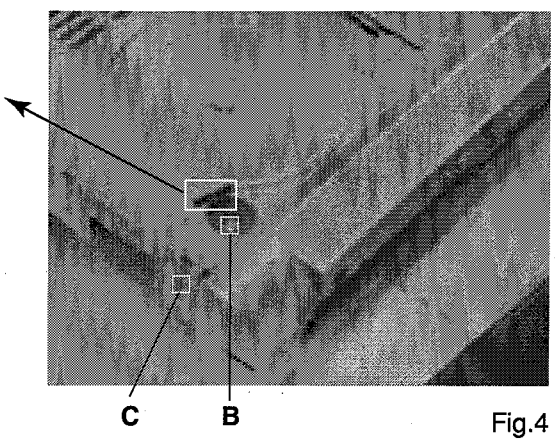


Fig.4

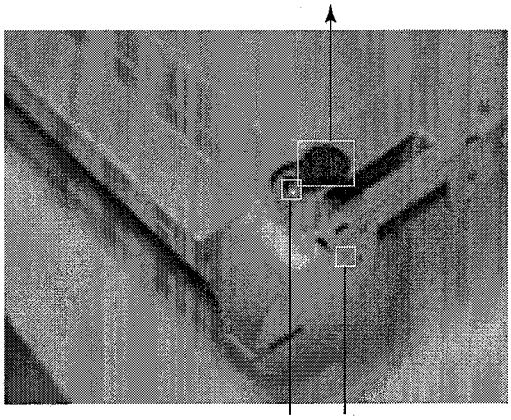


Fig.5

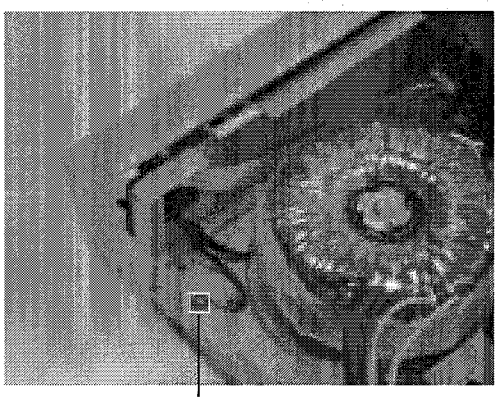


Fig.6

■ Removing the TUNER and panel rear (See Fig.7 & 8)

1. Remove two screws **G** before taking out tuner assy.
2. Remove thirteen screws **H** before detaching the rear panel.

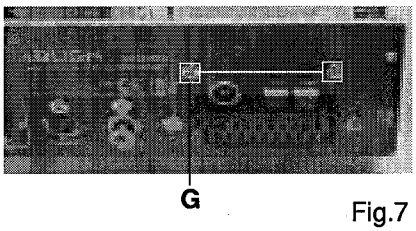


Fig.7

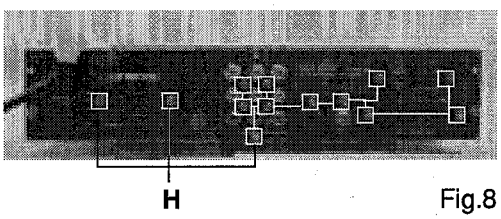


Fig.8

< CHASSIS, MAIN ASSEMBLY >

■ Removing the CD mechanism assembly with MPEG PCB (See Fig.9 & 10)

- Prior to performing the following procedure, remove the cabinet front assembly.

1. Remove five screws **J**.
2. Remove the MPEG holder three screws **L**.
3. Remove the MPEG holder three screws **K**.

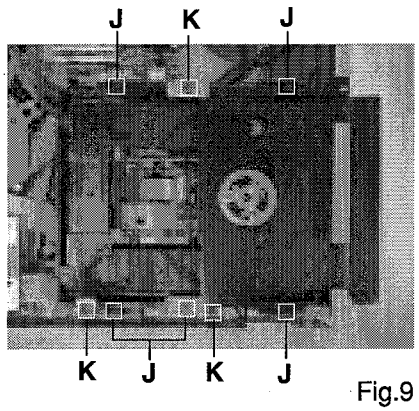


Fig.9

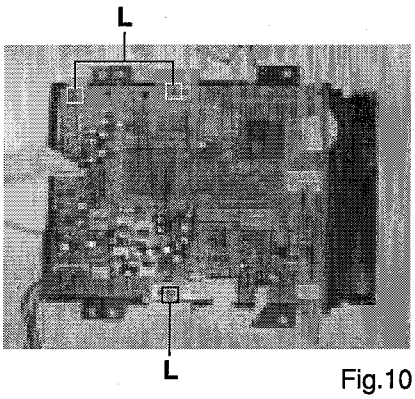


Fig.10

■ Removing the MAIN Board with heat sink

(See Fig.11)

1. Unscrew four screws **I**.
2. Take out the main board.

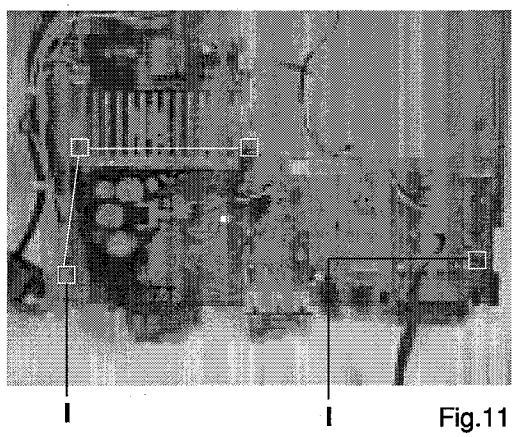


Fig.11

■ Removing FAN

(See Fig.12)

1. Unscrew two screws **M** from bottom.
2. Take out Fan and Fan washer.

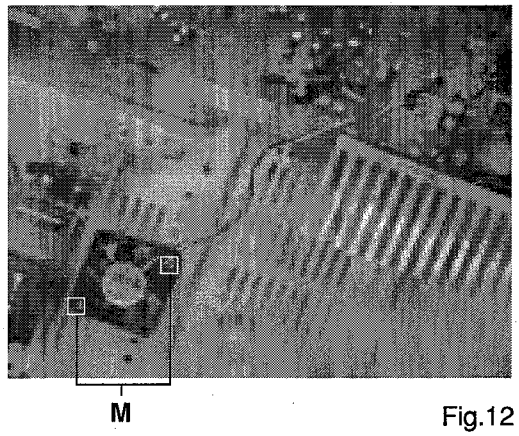


Fig.12

■ Removing standby PCB and HOLDER

(See Fig.13)

1. Unscrew two screws **N** from bottom.
2. Take out standby PCB and standby holder.

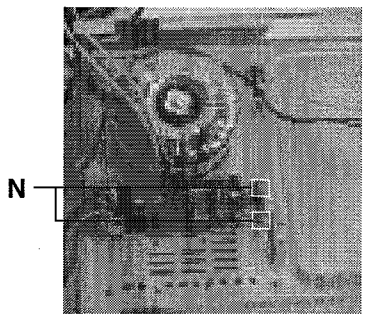


Fig.13

■ Removing Power, transformer

(See Fig.14)

1. Unscrew the screw bolt **P**.

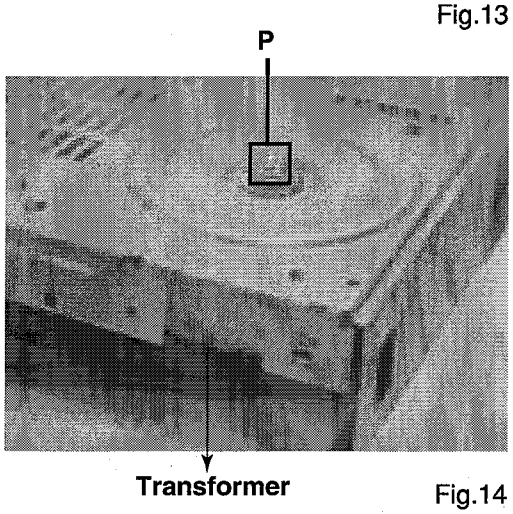


Fig.14

<Front panel assembly>

■ Removing the front PWB

(See Fig.15)

- Prior to performing the following procedure, remove the front panel assembly.

1. Remove ten screws **Q**.
2. Remove the KEY PCB of cabinet front.

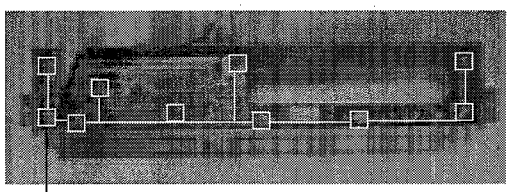
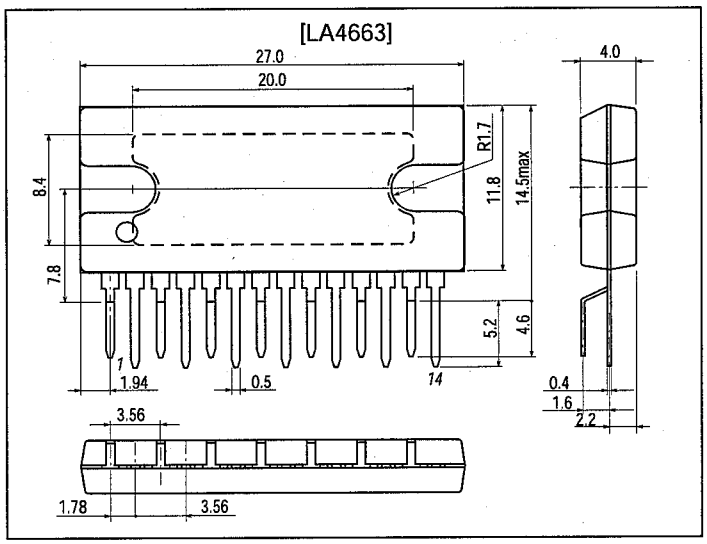


Fig.15

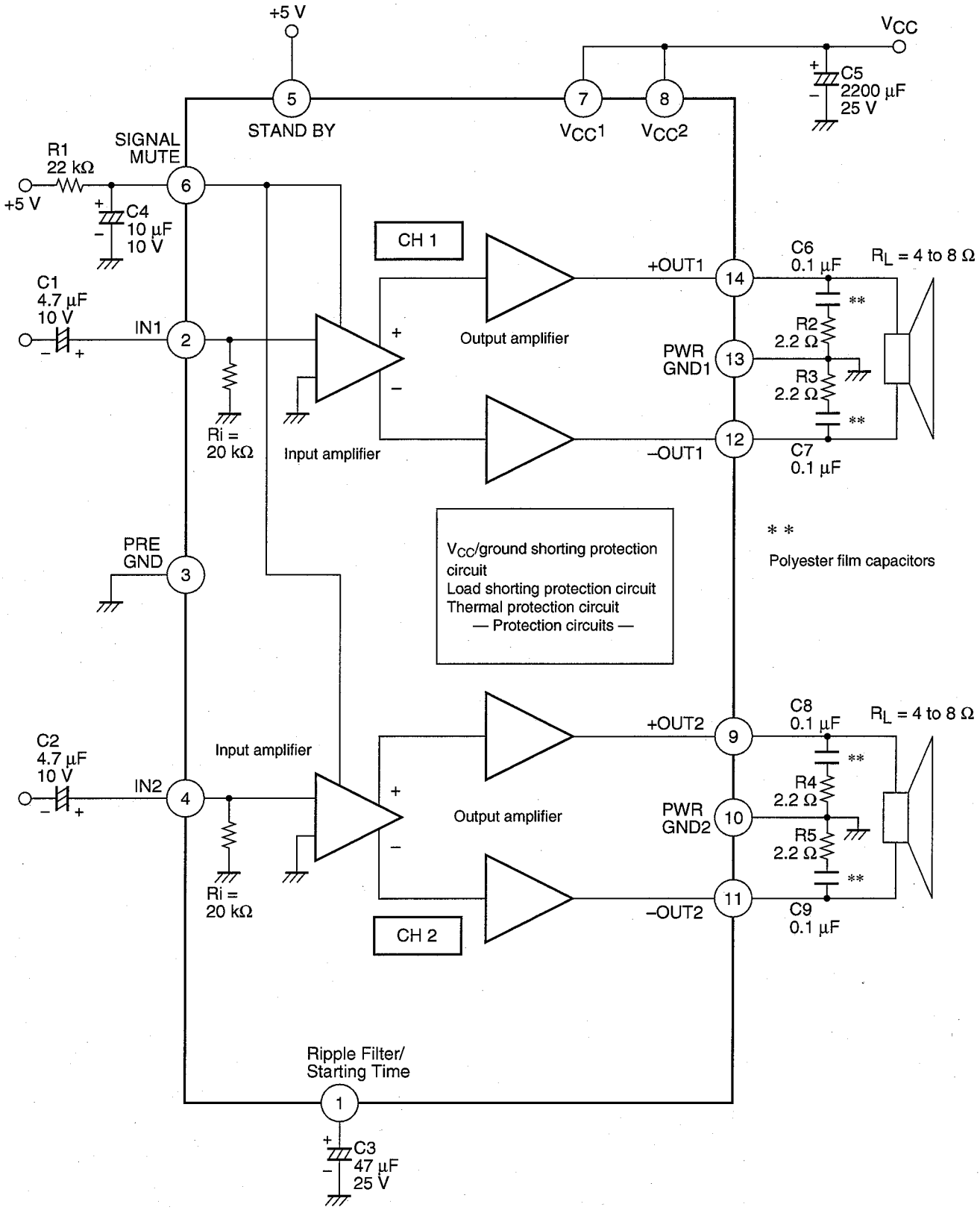
Description of major ICs

■ LA4663 (U8) : 2 channels power amplifier.

1. Pin layput



2. Pin Configuration



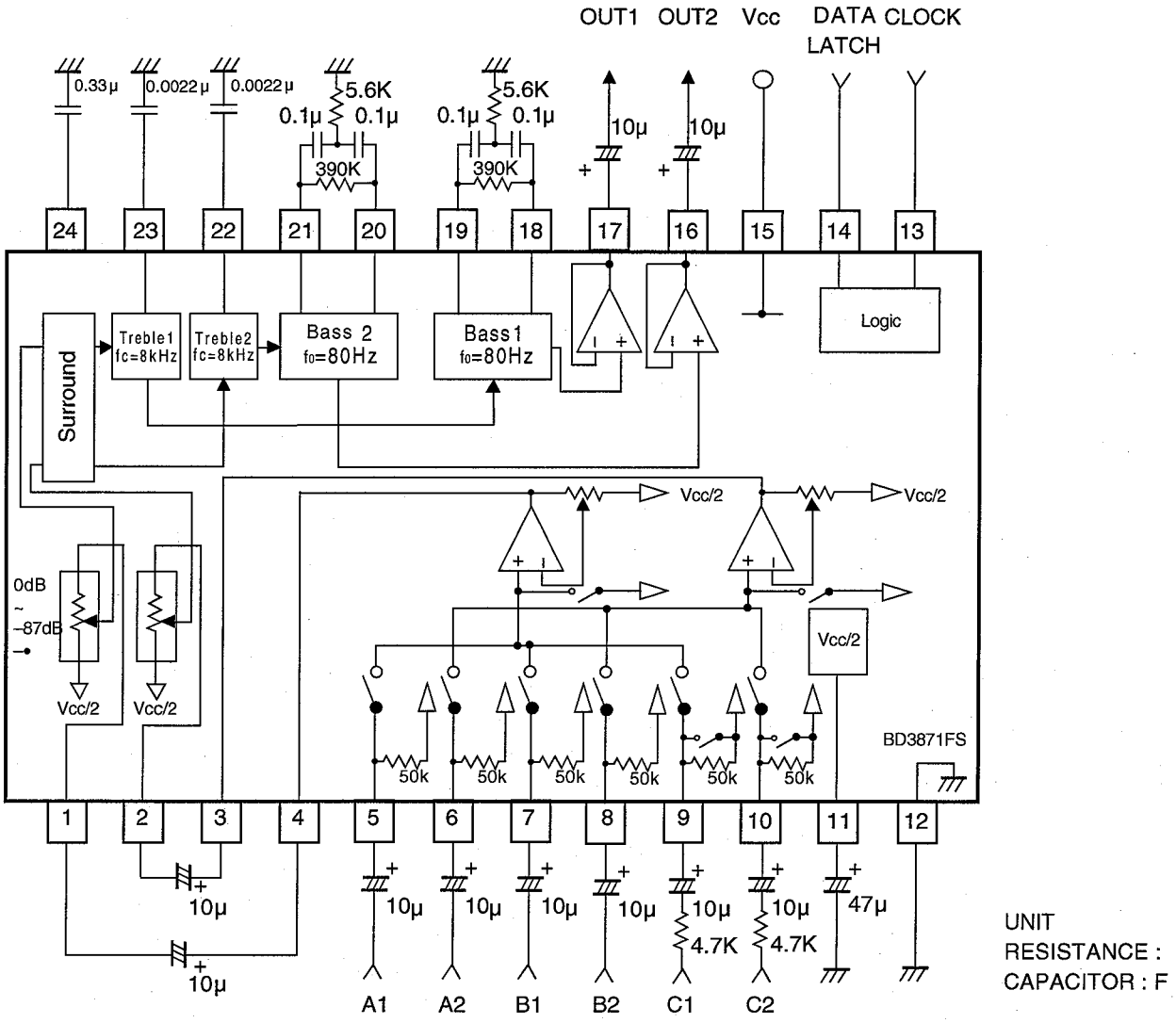
■ BD3871 (U3) : 2-channel codec & volume control

1. Electrical characteristics

(Unless otherwise noted ; Ta=25°C, Vcc=8V, f=1kHz, Vi=50mVrms, RL=10k , Rg=600 ,
INPUT GAIN=24dB, Vol=0dB, bass,treble=0dB, surround=OFF)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	IQ	—	8	21	mA	No signal
Output voltage gain	GV	22	24	26	dB	
Total harmonic distortion	THD	—	0.01	0.1	%	VOUT=1Vrms, Bw=400~30kHz
Maximum output voltage	Vomax	1.6	2.1	—	Vrms	THD=1%, Bw=400~30kHz
Residual noise voltage	Vno	—	4.5	15	μVrms	Rg=0 , Vol=—•, Bw=IHF–A
Output residual noise voltage	Vmno	—	40	80	μVrms	Rg=0 , Vol=0dB, Bw=IHF–A
Volume control range	VRI	–90	–87	–84	dB	VIN=1Vrms, 1dB/STEP
Bass control range	GB	+12 –16	+14 –14	+16 –12	dB	VIN=100mVrms, 2dB/STEP
Treble control range	TB	+10 –14	+12 –12	+14 –10	dB	VIN=100mVrms, 2dB/STEP
Surround gain (Antiphase)	Vsur	8	10	12	dB	VIN=100mVrms

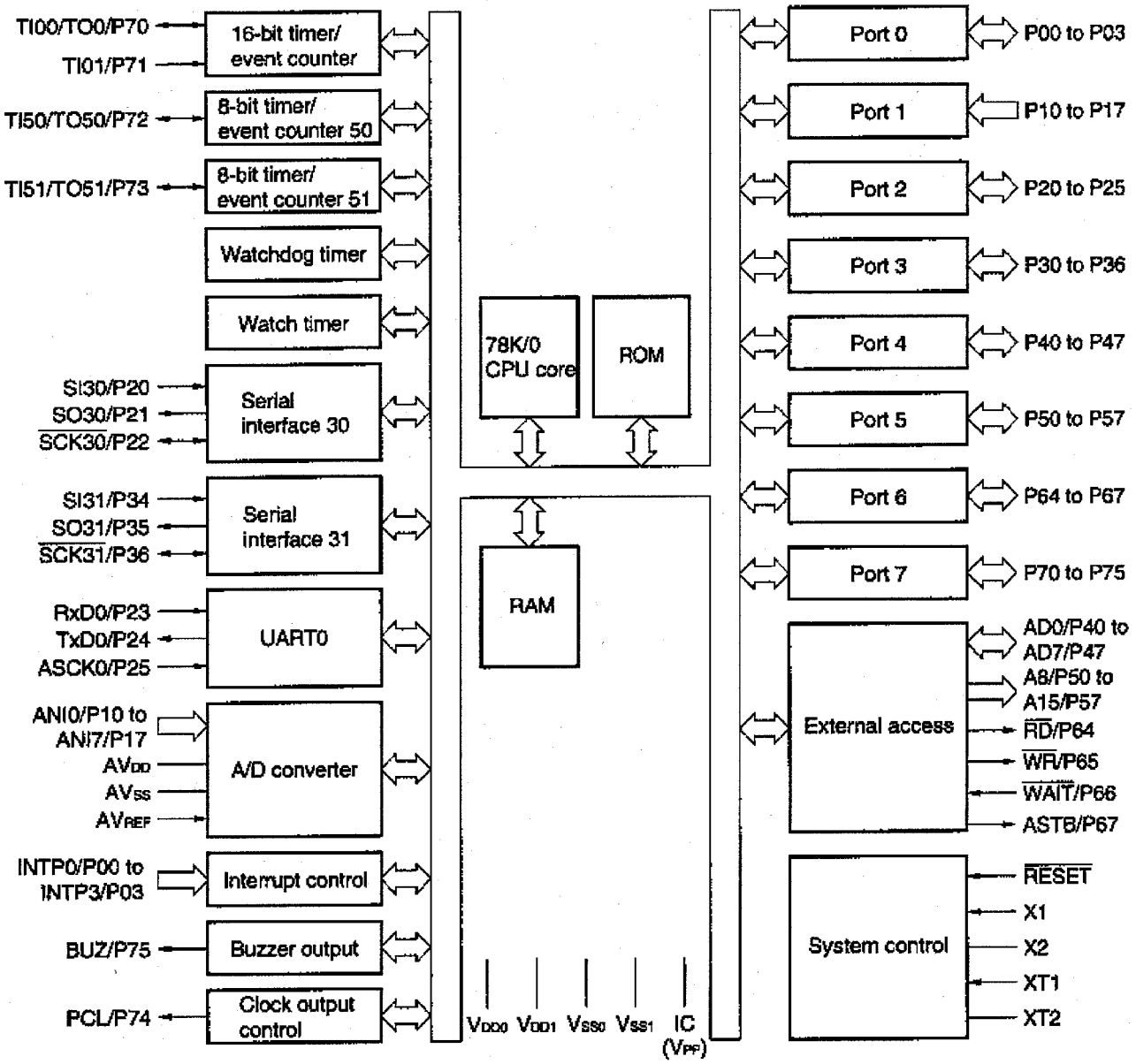
2. Application Circuit



UNIT
RESISTANCE :
CAPACITOR : F

■ UPD78F0034A (U5) : CPU

1. Block Diagram



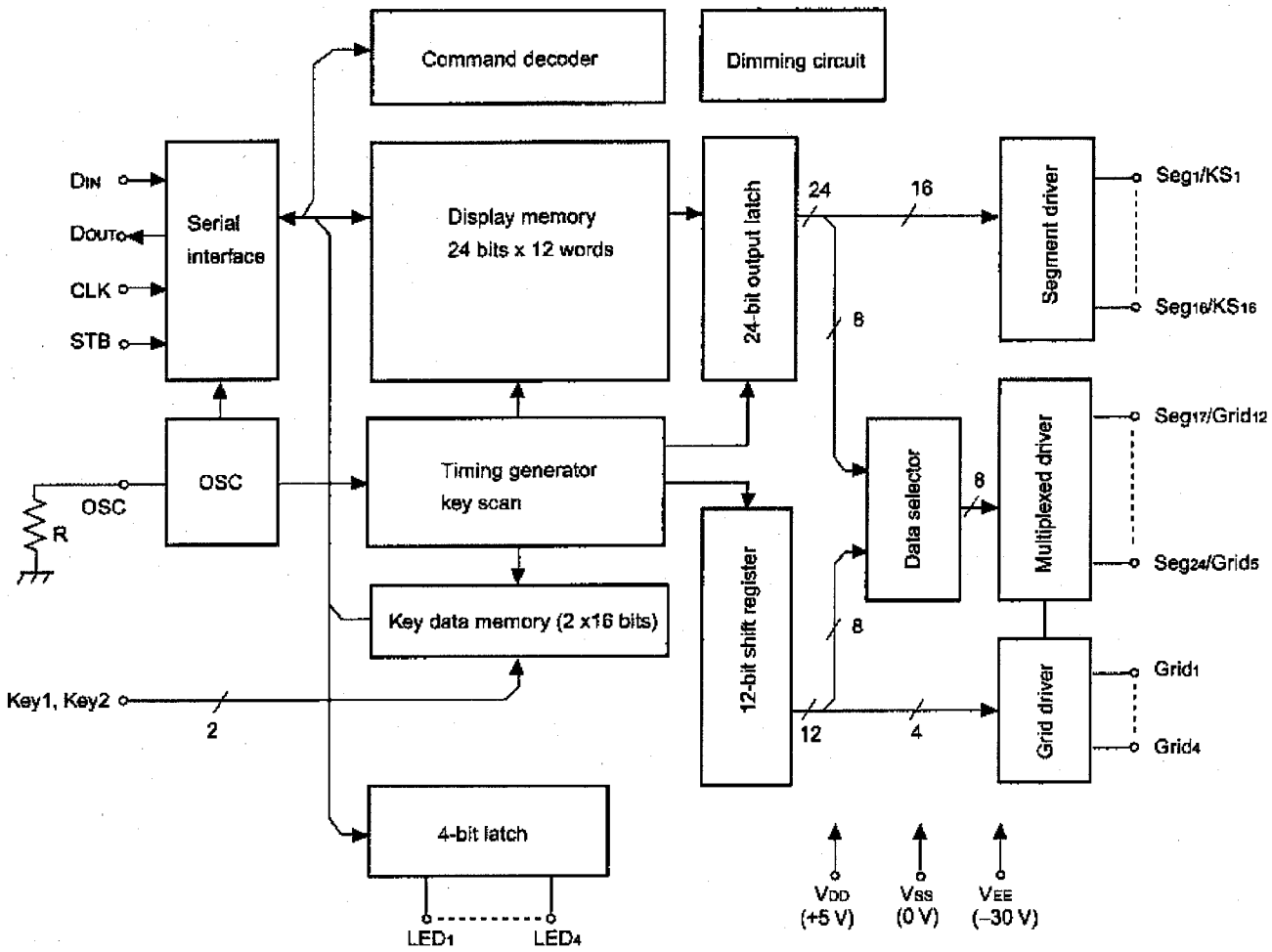
2. Outline of Function

Item \ Part Number		μPD780021A μPD780031A	μPD780022A μPD780032A	μPD780023A μPD780033A	μPD780024A μPD780034A	μPD78F0034A
Internal memory	ROM	8 KB (Mask ROM)	16 KB (Mask ROM)	24 KB (Mask ROM)	32 KB (Mask ROM)	32 KB[Note] (Flash memory)
	High-speed RAM	512 bytes		1024 bytes		1024 bytes[Note]
Memory space		64 KB				
General-purpose register		8 bits × 32 registers (8 bits × 8 registers × 4 banks)				
Minimum instruction execution time		Minimum instruction execution time changeable function				
	When main system clock selected	0.24 μs/0.48 μs/0.95 μs/1.91 μs/3.81 μs (@ 8.38 MHz operation)				
	When subsystem clock selected	122 μs (@ 32.768 kHz operation)				
Instruction set		• 16-bit operation • Multiply/divide (8 bits × 8 bits, 16 bits ÷ 8 bits) • Bit manipulate (set, reset, test, and Boolean operation) • BCD adjust, etc.				
I/O port		Total: 51 • CMOS input: 8 • CMOS I/O: 39 • N-ch open-drain I/O (5 V breakdown): 4				
A/D converter		• 8-bit resolution × 8 channels (μPD780021A, 780022A, 780023A, 780024A) • 10-bit resolution × 8 channels (μPD780031A, 780032A, 780033A, 780034A, 78F0034A) • Low-voltage operation: AV_{DD} = 1.8 to 5.5 V				
Serial interface		• 3-wire serial I/O mode: 2 channels • UART mode: 1 channel				
Timer		• 16-bit timer/event counter: 1 channel • 8-bit timer/event counter: 2 channels • Watch timer: 1 channel • Watchdog timer: 1 channel				
Timer output		Three outputs (8-bit PWM output enable: 2)				
Clock output		• 65.5 kHz, 131 kHz, 262 kHz, 524 kHz, 1.05 MHz, 2.10 MHz, 4.19 MHz, 8.38 MHz (8.38 MHz with main system clock) • 32.768 kHz (32.768 kHz with subsystem clock)				
Buzzer output		1.02 kHz, 2.05 kHz, 4.10 kHz, 8.19 kHz (8.38 MHz with main system clock)				
Vectored interrupt source	Maskable	Internal: 13, External: 5				
	Non-maskable	Internal: 1				
	Software	1				
Power supply voltage		V_{DD} = 1.8 to 5.5 V				
Operating ambient temperature		T_A = −40 to +85°C				
Package		• 64-pin plastic SDIP (19.05 mm (750)) • 64-pin plastic QFP (14 × 14) • 64-pin plastic TQFP (12 × 12) • 64-pin plastic LQFP (10 × 10)				

★

■ UPD 16315 (U10): VFD control ler / driver

1. Block Diagram

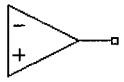
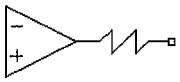
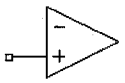
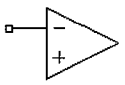
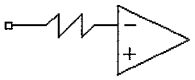
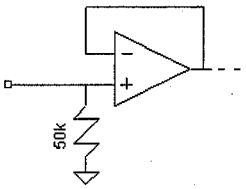
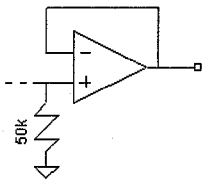
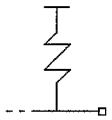


■ AP8202Q (U15): SRS WOW Audio Processor

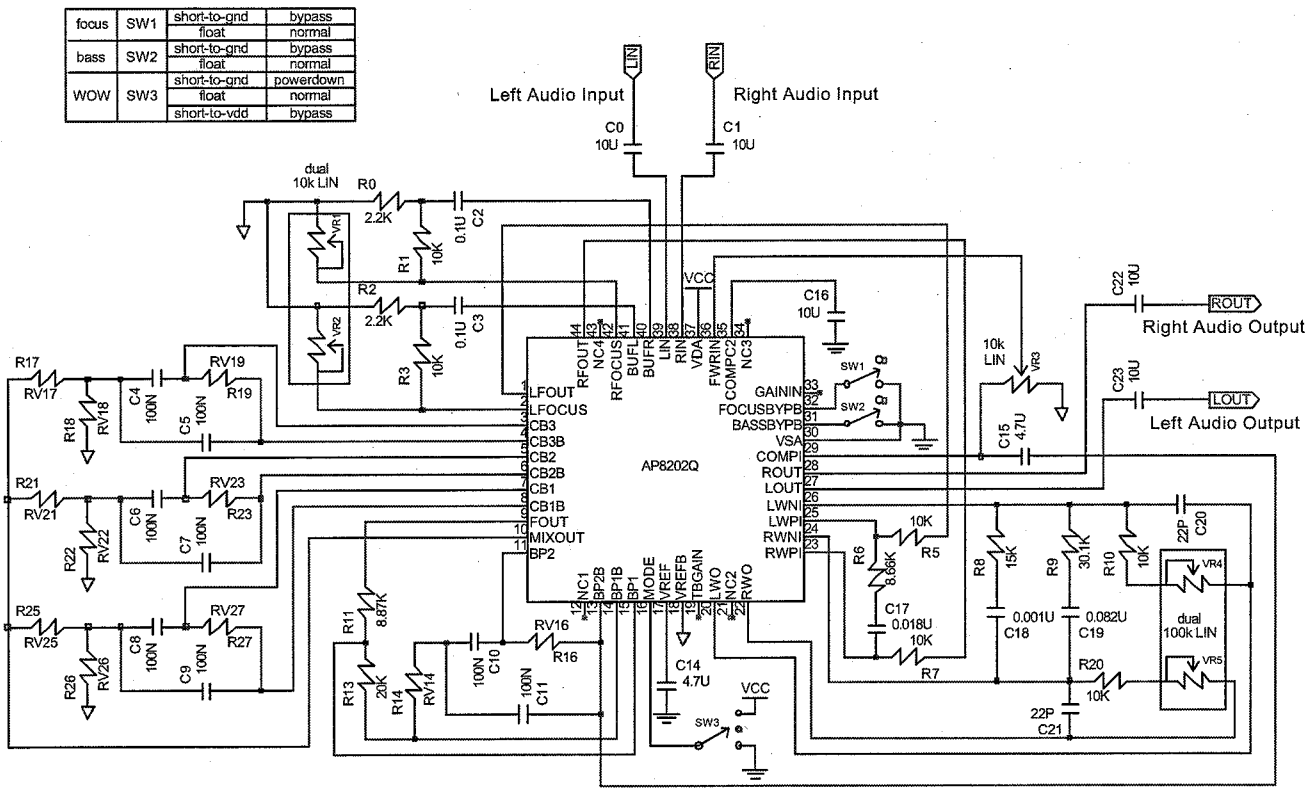
1. Device Pin Out and Pin Descriptions

Pin #	Pin Name	Descriptions
1	LFOUT	Focus Left output
2	LFOCUS	Focus Left input
3	CB3	Center Bandpass filter3 input
4	CB3B	Center Bandpass filter3 output
5	CB2	Center Bandpass filter2 input
6	CB2B	Center Bandpass filter2 output
7	CB1	Center Bandpass filter1 input
8	CB1B	Center Bandpass filter1 output
9	FOUT	Center Bandpass filters summed output
10	MIXOUT	Left and Right Channels mixed output
11	BP2	TruBass Bandpass filter2 input
12	NC1	Not Connected
13	BP2B	TruBass Bandpass filter2 output
14	BP1B	TruBass Bandpass filter1 output
15	BP1	TruBass Bandpass filter1 input
16	MODE	WOW/BYPASS/POWERDOWN mode selection. When MODE pin is opened, the chip is under WOW mode. When MODE is tied ground, the chip is under POWERDOWN mode. When MODE is tied to VCC, the chip is in BYPASS mode
17	VREF	Reference voltage input
18	VREFB	Reference voltage output
19	TBGAIN	Not used.
20	LWO	Width Left output
21	NC2	Not Connected
22	RWO	Width Right output
23	RWPI	Width Right positive input
24	RWNI	Width Right negative input
25	LWPI	Width Left positive input
26	LWNI	Width Left negative input
27	LOUT	Left channel audio output
28	ROUT	Right channel audio output
29	COMPI	TruBass Compressor input
30	GND	Ground
31	BASSBYPB	TruBass Bypass control
32	FOCUSBYPB	Focus Bypass control
33	GAININ	TruBass Multiplier gain control input
34	NC3	Not Connected
35	COMPC2	TruBass Compressor capacitor output
36	FWRIN	TruBass Punch control
37	VCC	Positive power supply
38	RIN	Right channel audio input
39	LIN	Left channel audio input
40	BUFR	Buffered Right channel output
41	BUFL	Buffered Left channel output
42	RFOCUS	Focus Right input
43	NC4	Not Connected
44	RFOUT	Focus Right output

2. Analog Pin Group

Analog Pin Group	Pin # within group	Description	Diagram
1	1,4,6,8,9,10,13,14,17,18,20,22,27,28,44	Connected to op-amp output directly	
2	33,35	Connected to op-amp output through a resistor	
3	23,25	Connected to op-amp +ve input directly	
5	3,5,7,11,15,24,26	Connected to op-amp –ve input directly	
6	2,29,36,42	Connected to op-amp –ve input through a resistor	
7	38,39	Buffer input	
8	40,41	Buffer output	
9	31,32	Internal pullup	

3. Application Circuit I



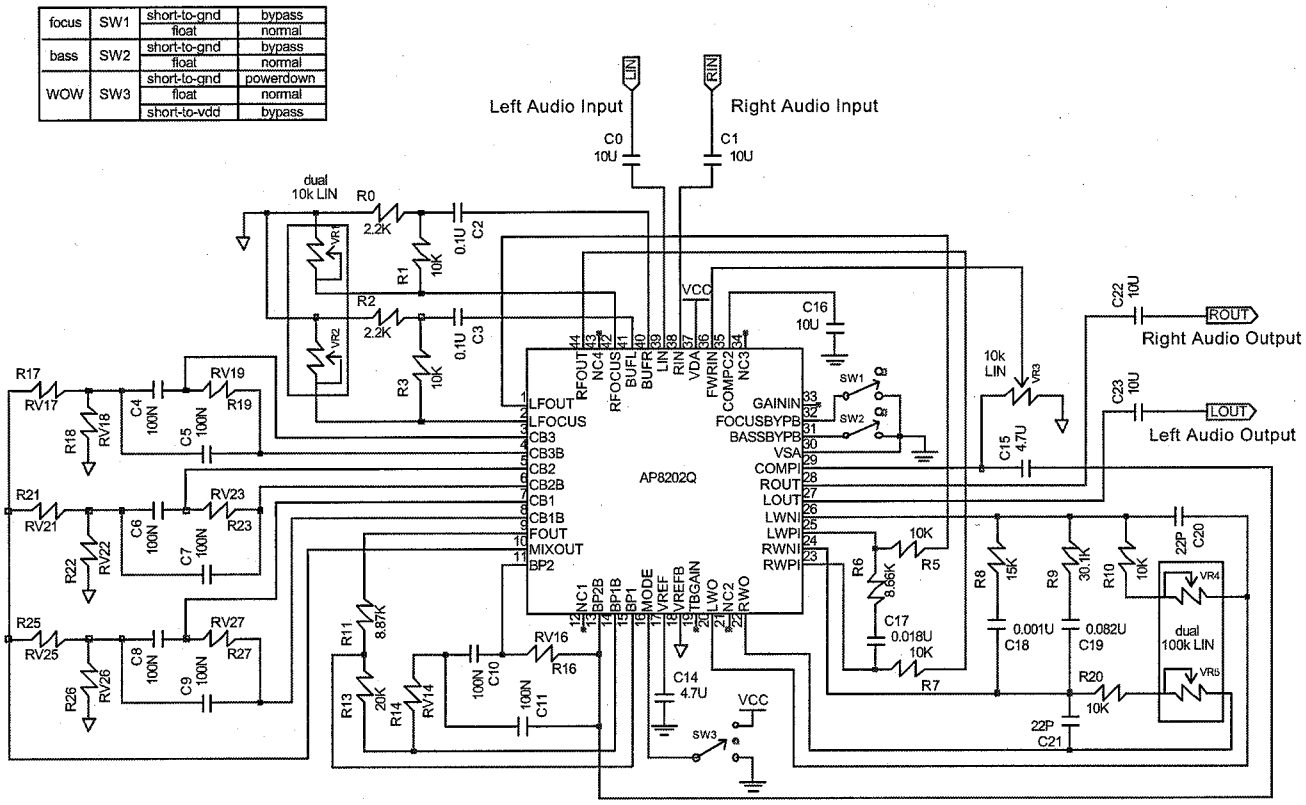
R	Filters Setting for TruBass							
	40Hz	60Hz	100Hz	150Hz	200Hz	250Hz	300Hz	400Hz
R14	40.2k	26.7k	15.8k	10.7k	7.87k	6.34k	5.36k	4.02k
R16	40.2k	26.7k	15.8k	10.7k	7.87k	6.34k	5.36k	4.02k
R17	56.2k	37.4k	22.6k	15k	11.3k	9.09k	7.5k	5.62k
R18	12.1k	8.06k	4.87k	3.24k	2.43k	1.91k	1.62k	1.21k
R19	158k	107k	63.4k	42.2k	31.6k	25.5k	21k	15.8k
R21	44.2k	30.1k	17.8k	11.8k	8.87k	7.15k	6.65k	5.36k
R22	7.87k	5.23k	3.09k	2.1k	1.54k	1.24k	1.18k	931
R23	107k	71.5k	42.2k	28k	21k	16.9k	15.8k	12.7k
R25	40.2k	26.7k	15.8k	10.7k	7.87k	6.34k	6.34k	5.36k
R26	5.62k	3.83k	2.26k	1.5k	1.13k	909	909	750
R27	78.7k	53.6k	31.6k	21k	15.8k	12.7k	12.7k	10.7k

Tolerance of all resistors = 1%
Tolerance of capacitors (C2, C3, C4, C5, C6, C7, C8, C9 C10, C11, C15, C17, C18, C19, C20, C21) = 10%

Remark: For detailed setting of the filter value to match with the speaker, please check with the authorized chip suppliers.

4. Application Circuit II

* Resistors (R28, R29) added at RFOCUS and LFOCUS to control Focus Gain and Noise



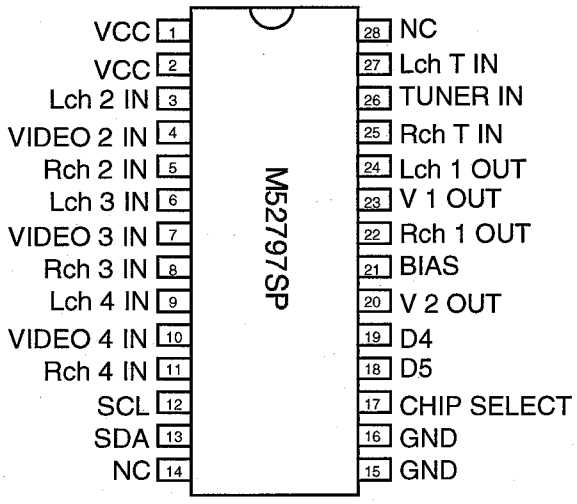
R	Filters Setting for TruBass							
	40Hz	60Hz	100Hz	150Hz	200Hz	250Hz	300Hz	400Hz
R14	40.2k	26.7k	15.8k	10.7k	7.87k	6.34k	5.36k	4.02k
R16	40.2k	26.7k	15.8k	10.7k	7.87k	6.34k	5.36k	4.02k
R17	56.2k	37.4k	22.6k	15k	11.3k	9.09k	7.5k	5.62k
R18	12.1k	8.06k	4.87k	3.24k	2.43k	1.91k	1.62k	1.21k
R19	158k	107k	63.4k	42.2k	31.6k	25.5k	21k	15.8k
R21	44.2k	30.1k	17.8k	11.8k	8.87k	7.15k	6.65k	5.36k
R22	7.87k	5.23k	3.09k	2.1k	1.54k	1.24k	1.18k	931
R23	107k	71.5k	42.2k	28k	21k	16.9k	15.8k	12.7k
R25	40.2k	26.7k	15.8k	10.7k	7.87k	6.34k	6.34k	5.36k
R26	5.62k	3.83k	2.26k	1.5k	1.13k	909	909	750
R27	78.7k	53.6k	31.6k	21k	15.8k	12.7k	12.7k	10.7k

Tolerance of all resistors = 1%
Tolerance of capacitors (C2, C3, C4, C5, C6, C7, C8, C9 C10, C11, C15, C17, C18, C19, C20, C21) = 10%

Remark: For detailed setting of the filter value to match with the speaker, please check with the authorized chip suppliers.

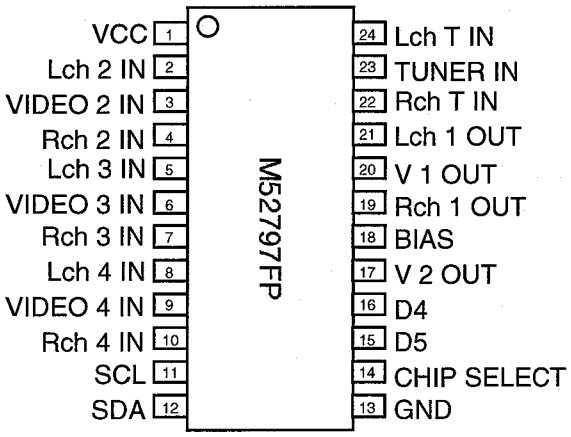
■ M52797E (U306) : AV switch with 12C bus control

1. Pin Configuration (Top view)



Outline 28P4B
(Lead pitch :1.778mm)

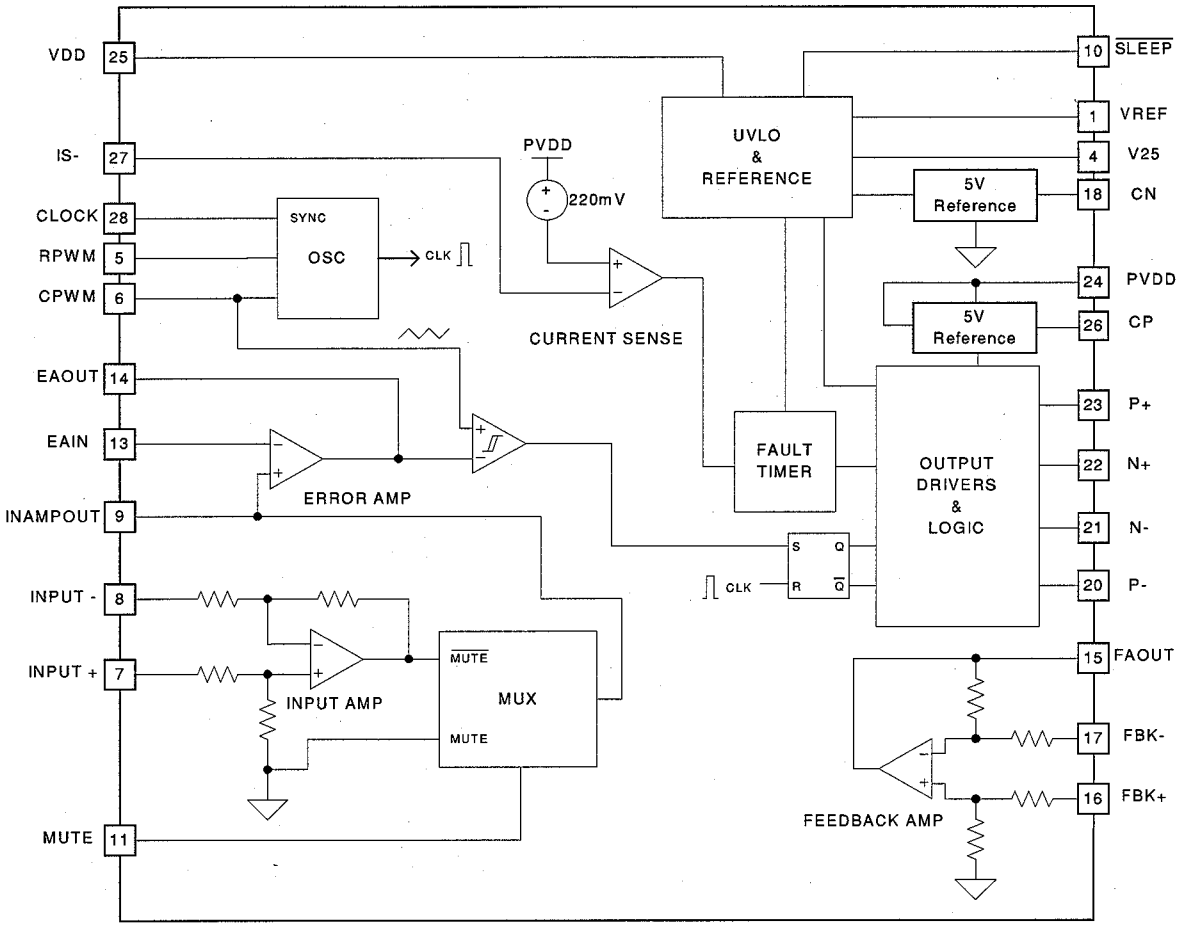
NC: No connection



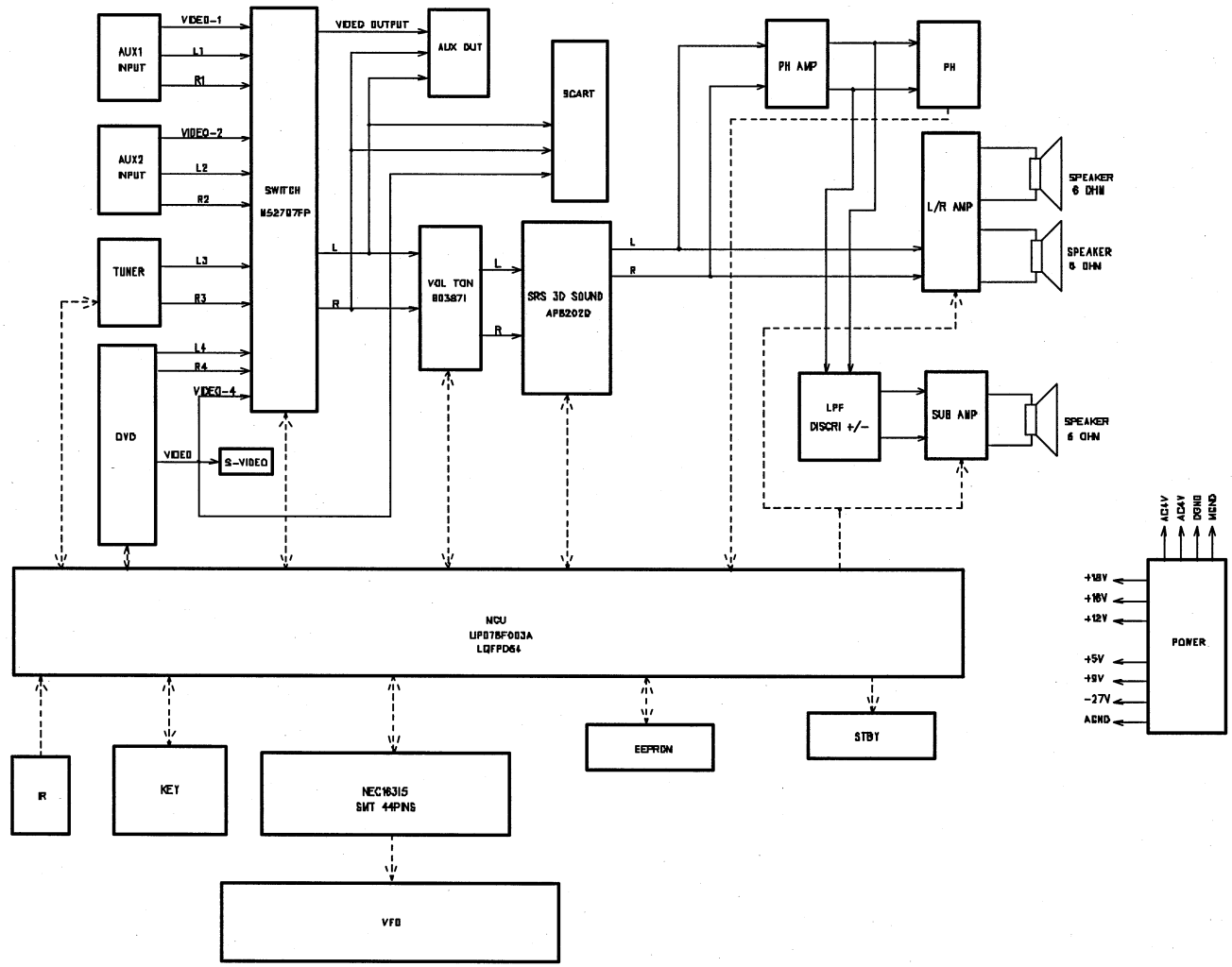
Outline 24P2N-B
(Lead pitch :1.27mm)

■ LX171/LX1711 (U17) :

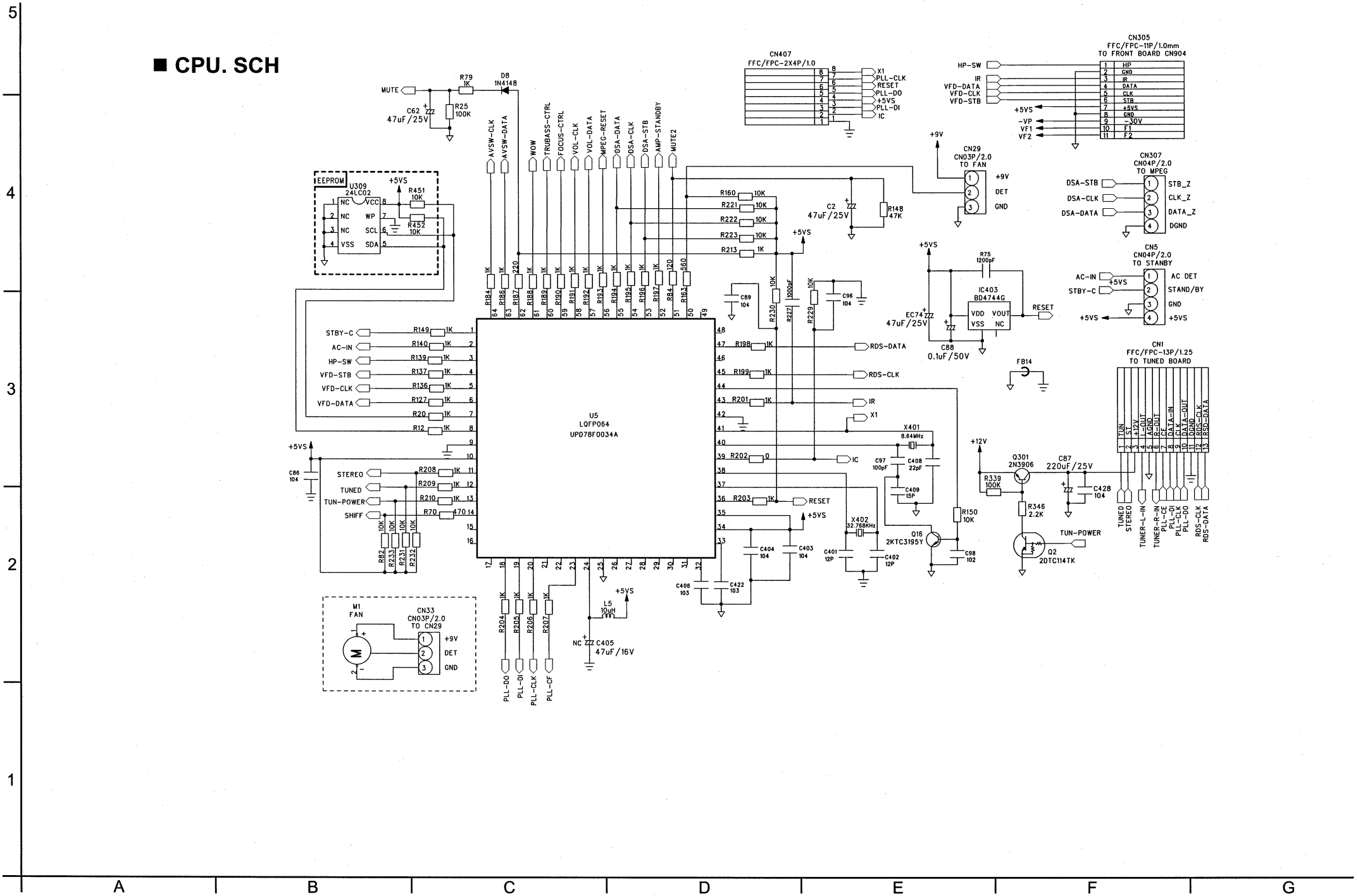
Class-D mono power amplifier controller



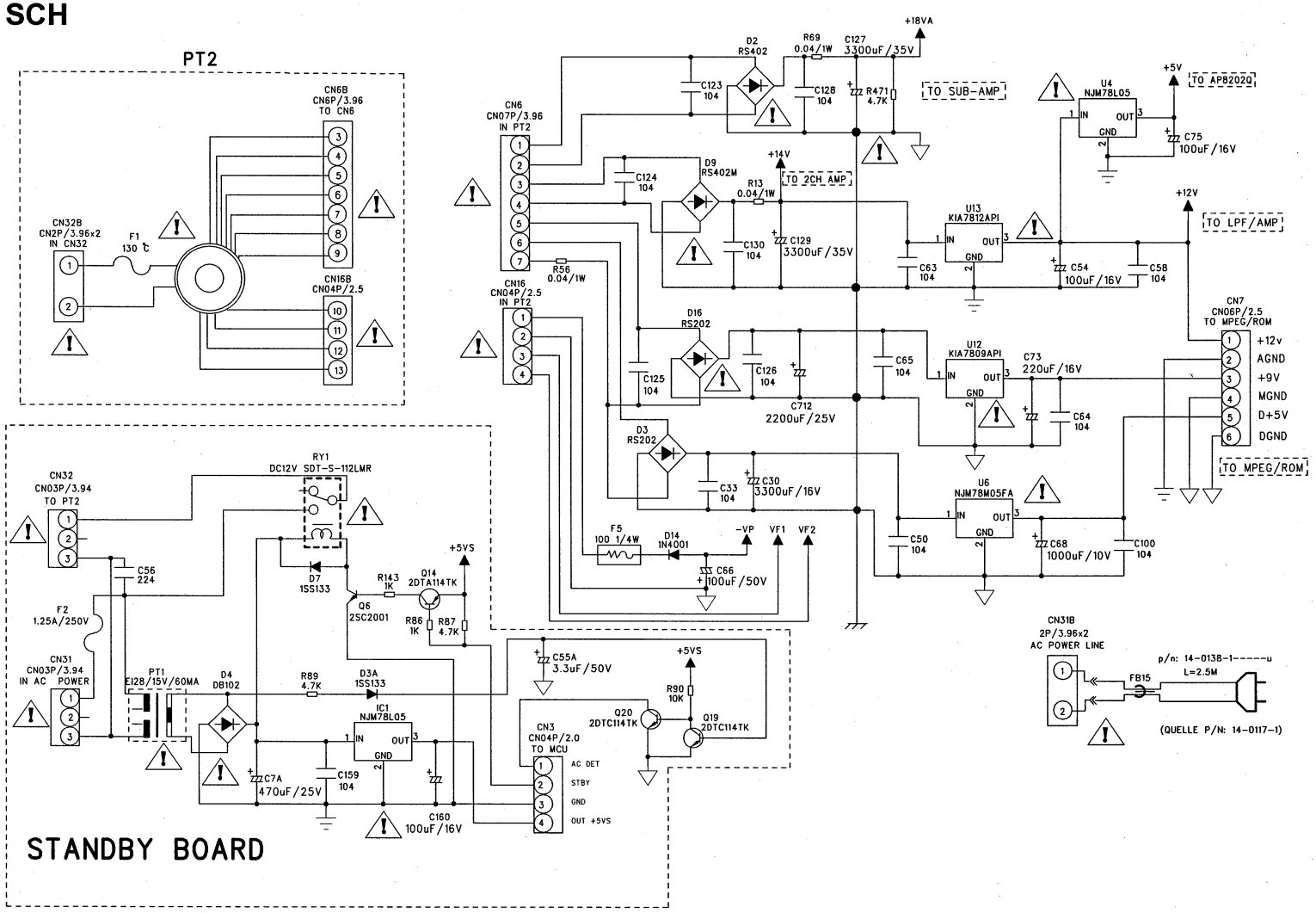
■ Block Diagram



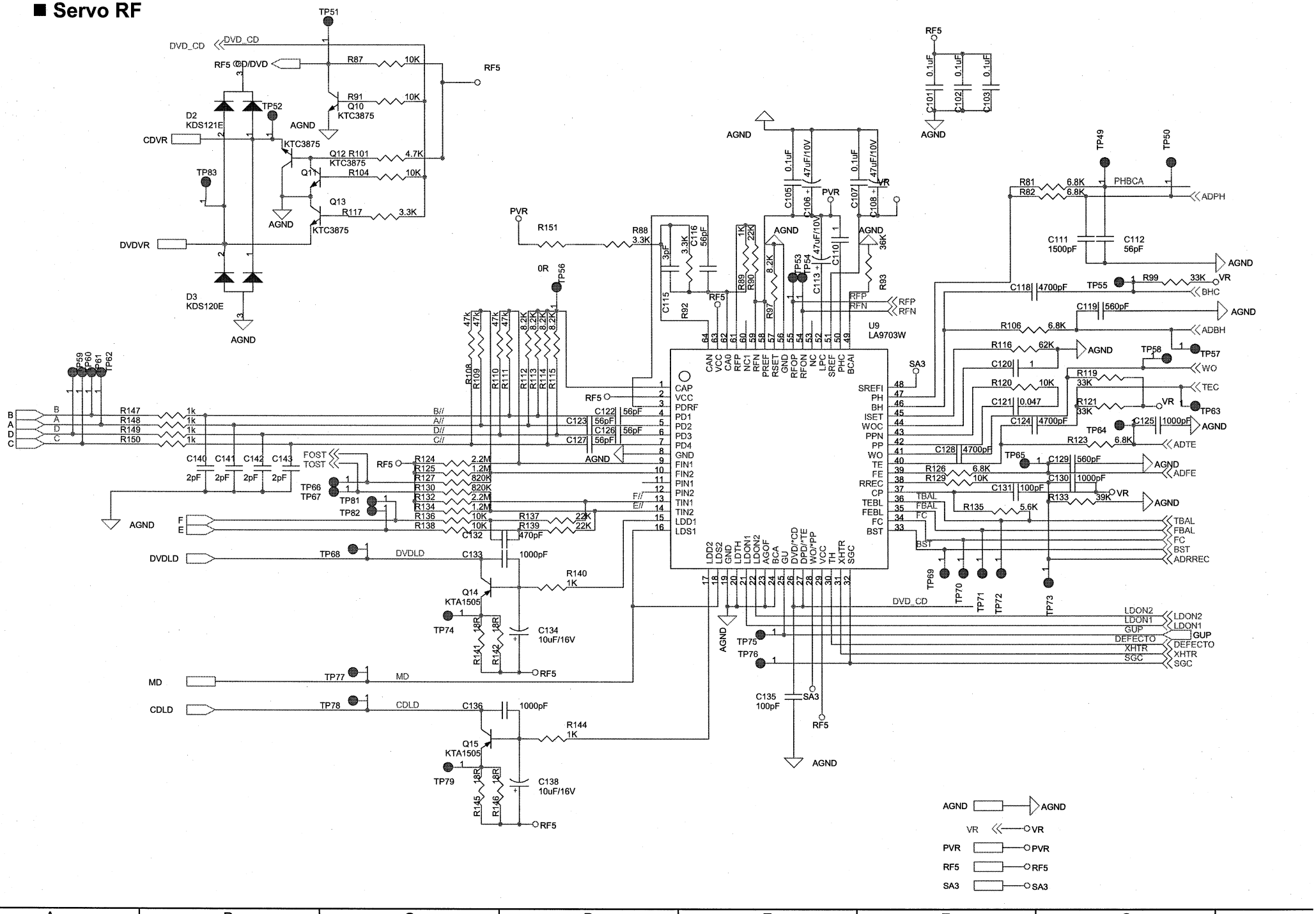
■ CPU. SCH


U5
LQFP064
UPD78F0034A
U309
24LC02
EEPROM
+5VS
MUTE
D8
1N4148
R79
1K
R25
100K
C62
47uF/25V
AVSW-CLK
AVSW-DATA
WOW
TRUBASS-CTRL
FOCUS-CTRL
VOL-CLK
VOL-DATA
MPEG-RESET
DSA-DATA
DSA-CLK
DSA-STB
AMP-STANDBY
MUTE2
CN407
FFC/FPC-2X4P/1.0
X1
PLL-CLK
RESET
PLL-DO
+5VS
PLL-DI
IC
CN305
FFC/FPC-11P/1.0mm
TO FRONT BOARD CN904
HP-SW
IR
VFD-DATA
VFD-CLK
VFD-STB
-VP
VF1
VF2
HP
GND
DATA
CLK
STB
-30V
F1
F2
CN29
CN03P/2.0
TO FAN
+9V
DET
GND
CN307
CN04P/2.0
TO MPEG
DSA-STB
DSA-CLK
DSA-DATA
STB_Z
CLK_Z
DATA_Z
DGND
CN5
CN04P/2.0
TO STANBY
AC-IN
STBY-C
AC DET
STAND/BY
GND
IC403
BD4744G
VDD
VOUT
VSS
NC
RESET
R75
1200pF
EC74
47uF/25V
C88
0.1uF/50V
CN1
FFC/FPC-13P/1.25
TO TUNED BOARD
TUN
ST
+12V
L-OUT
AGND
R-OUT
CE
DATA-IN
CLK
DATA-OUT
DGND
RDS-CLK
RSD-DATA
FB14
Q301
2N3906
R339
100K
R346
2.2K
C87
220uF/25V
C428
104
Q2
2DTC114TK
TUN-POWER
TUNED
STEREO
TUNER-L-IN
TUNER-R-IN
PLL-CE
PLL-CL
PLL-DI
PLL-DO
RDS-CLK
RDS-DATA
STBY-C
AC-IN
HP-SW
VFD-STB
VFD-CLK
VFD-DATA
STEREO
TUNED
TUN-POWER
SHIFF
R149
R140
R139
R137
R136
R127
R20
R12
R208
R209
R210
R70
R82
R233
R231
R232
C86
104
M1
FAN
CN33
CN03P/2.0
TO CN29
L5
10uH
NC
C405
47uF/16V
C2
47uF/25V
R148
47K
R160
R221
R222
R223
R213
C89
104
C96
104
R230
R227
R229
R198
R199
R201
R202
R203
RDS-DATA
RDS-CLK
IR
X1
IC
RESET
X401
8.64MHz
C97
100pF
C408
22pF
C409
15P
X402
32.768KHz
C401
12P
C402
12P
Q16
2KTC3195Y
R150
10K
C98
102
C404
104
C403
104
C406
103
C422
103
R204
R205
R206
R207
PLL-DO
PLL-DI
PLL-CLK
PLL-CE

■ Power/Standby SCH

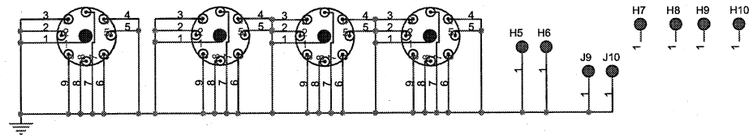


■ Servo RF


U9
LA9703W
CAP
VCC
PDRF
PD1
PD2
PD3
PD4
GND
FIN1
FIN2
PIN1
PIN2
TIN1
TIN2
LDD1
LDS1
SREFI
PH
BH
ISET
WOC
PPN
PP
WO
TE
FE
RREC
CP
TEBL
FEBL
FC
BST
CAN
VCC
CA0
RFP
NC1
RFN
PREF
RSET
GND
RFOP
RFON
NC
LPC
SREF
PHC
BCAI
LDD2
LDS2
GND
LDTH
LDON1
LDON2
AGOF
BCA
GU
DVD/*CD
DPD/*TE
WO/*PP
VCC
TH
XHTR
SGC
DVD_CD
CDVR
DVDVR
MD
CDLD
FOST
TOST
PHBCA
ADPH
ADBH
ADTE
ADFE
TBAL
FBAL
FC
BST
ADRREC
LDON2
LDON1
GUP
DEFECTO
XHTR
SGC
WO
TEC
BHC
RFP
RFN
AGND
RF5
PVR
SA3
VR

1-20

■ Main Power I/F



MONITOR DEBUGGER I/F

JD2

SO1
SI1

JD3

I/F

CS
CLK
DOUT
FBD6
FBD8
FBD10

DEBBUG TERMINAL I/F

JD4

SO2
SI2

VCC

VADDIS 5E

RESET#
FPDIN
IRIRQ
FPSEL
FPCLK
FPDOUT
SO2
SI2
MEMAD[0..19]
MEMDA[0..15]
MEMCS1#
MEMCS0#
RD-
WR-
SDA
SCL
COSYNC
HA[0..12]
HD[0..7]
OPSW
CLSW
LSW-
+5VA
VDDP
AVD[0..7]
VCC
+3.3V
DSP_VCC18
GND

ICETDI
ICETDO
ICETMS
ICETCK

MDI
ML
MUTEC
SPDIF_P
WRQ
SPD_FG
INT_DEC-
MIC_ON
AOUT1_P
AOUT2_P
FS1
FS2
MC
DREQ-
DBGN-
C2F
CVBS_GY
Y_R_V
C_B_U
CVBS_C
AMCLK_P
ABCLK_P
ALRCLK_P
AOUT0_P
CD_DATA
BCK
LRCK
DCLK
DACK-
DERR-
LSI_RST-
DMUTE-
OPEN-
CLOSE-
GUP
RDY-
SAMCLK
CS_DVD-

AUDIO DAC AND VIDEO FILTER

MDI
ML
MUTEC
MIC_ON
ASDAT1
ASDAT2
MC
CVBS-G-Y
Y-R-V
C-B-U
CVBS-C
AMCLK
ABCLK
ALRCLK
ASDAT0

V-OUT
U-OUT
C-OUT
Y-OUT
FBD1
FBD2
FBD3
FBD4
V/R/Y
U/B/C
CVBS1
Y/G/CVBS2

AOUT-RMAIN
AOUT-LMAIN
AOUT-RREAR
AOUT-LREAR
AOUT-LFE
AOUT-CENT
FBD7
FBD9
MAIN_R
MAIN_L

+12VA
+12VAA
+3.3V
-12VA
+5VA
+5VV
GND

MICIN1
MICIN2

5-AUDIO DAC AND VIDEO FILTER

Host Memory

VCC
VDDP
SD3
+3.3V
GND
MEMAD[0..19]
MEMDA[0..15]
MEMCS1#
MEMCS0#
RD-
WR-
RESET#
SDA
SCL

4-MEMORY

POWER

J2

+12V
AGND
+9V
MGND
+D5V
DGND
$PIN15
$PIN16
$PIN17
+12VAA
+12VA
$PIN3
+5VV
$PIN5
SD25
M5
SD3
SA3
MVCC
RF5

Main Power I/F

POWER

SAMSUNG SERVO

AVD[0..7]
HD[0..7]
HA[0..12]
DREQ-
DBGN-
C2F
CD_DATA
BCK
LRCK
DCLK
DACK-
DERR-
WRQ
INT_DEC-
SPD_FG
LSI_RST-
DMUTE-
OPEN-
CLOSE-
GUP
RDY-
SAMCLK
WR-
RD-
CS_DVD-
SA3
M5
SD3
SD25
MVCC
RF5
MGND
AGND
GND

6-SANYO SERVO

SF-PVR-502W

RF5
FO-
FO+
TR+
TR-
B
A
E
PVR
F
D
C
CD/DVD
CDVR
DVDVR
MD
CDLD
DVDLD
L1
FB
C4 104
C5 104
C3 104

J5

SPDIFVCC
+5VA
FBD15
CD3 0.1uF
470K RD3
UD1
74HCU04
CD1 0.1uF
CD2 100uF/10V
CD4 0.1uF
RD4 330R
FBD16
SPDIF_COAX
RD6 2.2K
RD5 91R

J3

FS2
FS1
RESET
SPDIF_COAX
MUTE
Y/G/CVBS2
V/R/Y
U/B/C
CVBS1
DVD/FR
AGND
DVD/FL

C7 104

SLED1
SLED2
SP+
SP-
LMTSW

J6

PLAYER_SLED

LSW-
100R
R7
R8 4.7K
R9 4.7K
R10 4.7K
SD3

MLD1
MLD2
C12 104
OPSW
R11 100R
CLSW
R12 100R
GGG2
GGG1

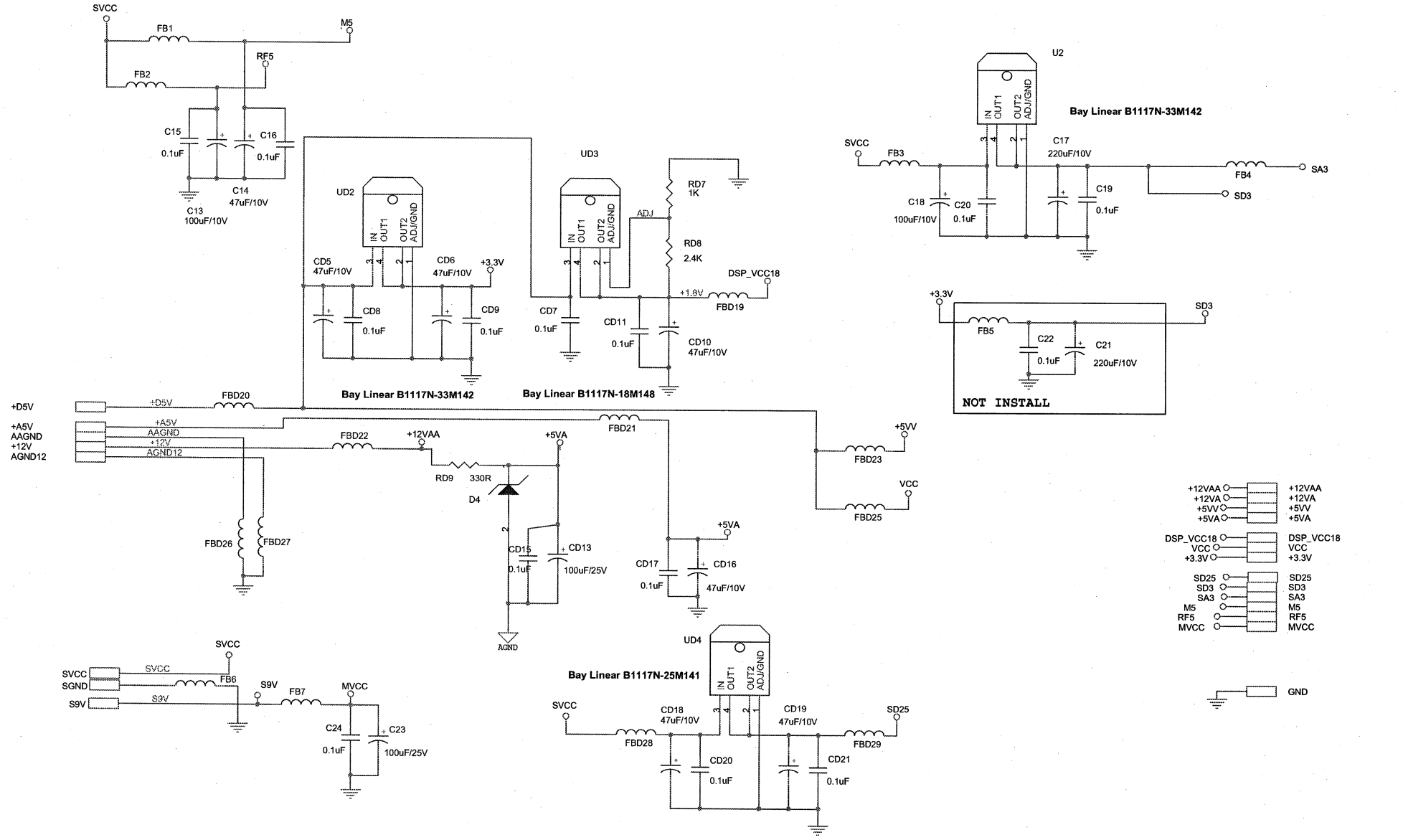
J7

PLAYER_TRAY

TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP12
TP13
TP14
TP15
TP16

A B C D E F G 1-21

■ Power


SVCC
FB1
M5
FB2
RF5
C15
0.1uF
C16
0.1uF
C14
47uF/10V
C13
100uF/10V
UD2
IN
OUT1
OUT2
ADJ/GND
CD5
47uF/10V
CD6
47uF/10V
+3.3V
CD8
0.1uF
CD9
0.1uF
Bay Linear B1117N-33M142
UD3
RD7
1K
ADJ
RD8
2.4K
DSP_VCC18
+1.8V
FBD19
CD7
0.1uF
CD11
0.1uF
CD10
47uF/10V
Bay Linear B1117N-18M148
U2
Bay Linear B1117N-33M142
SVCC
FB3
C17
220uF/10V
FB4
SA3
SD3
C18
100uF/10V
C20
0.1uF
C19
0.1uF
+3.3V
FB5
C22
0.1uF
C21
220uF/10V
SD3
NOT INSTALL
+D5V
FBD20
+A5V
AAGND
+12V
AGND12
FBD22
+12VAA
+5VA
FBD21
+5VV
FBD23
VCC
FBD25
RD9
330R
D4
FBD26
FBD27
CD15
0.1uF
CD13
100uF/25V
AGND
CD17
0.1uF
CD16
47uF/10V
+12VAA
+12VA
+5VV
+5VA
DSP_VCC18
VCC
+3.3V
SD25
SD3
SA3
M5
RF5
MVCC
GND
SVCC
SGND
S9V
FB6
FB7
MVCC
C24
0.1uF
C23
100uF/25V
UD4
Bay Linear B1117N-25M141
CD18
47uF/10V
CD19
47uF/10V
SD25
FBD28
FBD29
CD20
0.1uF
CD21
0.1uF

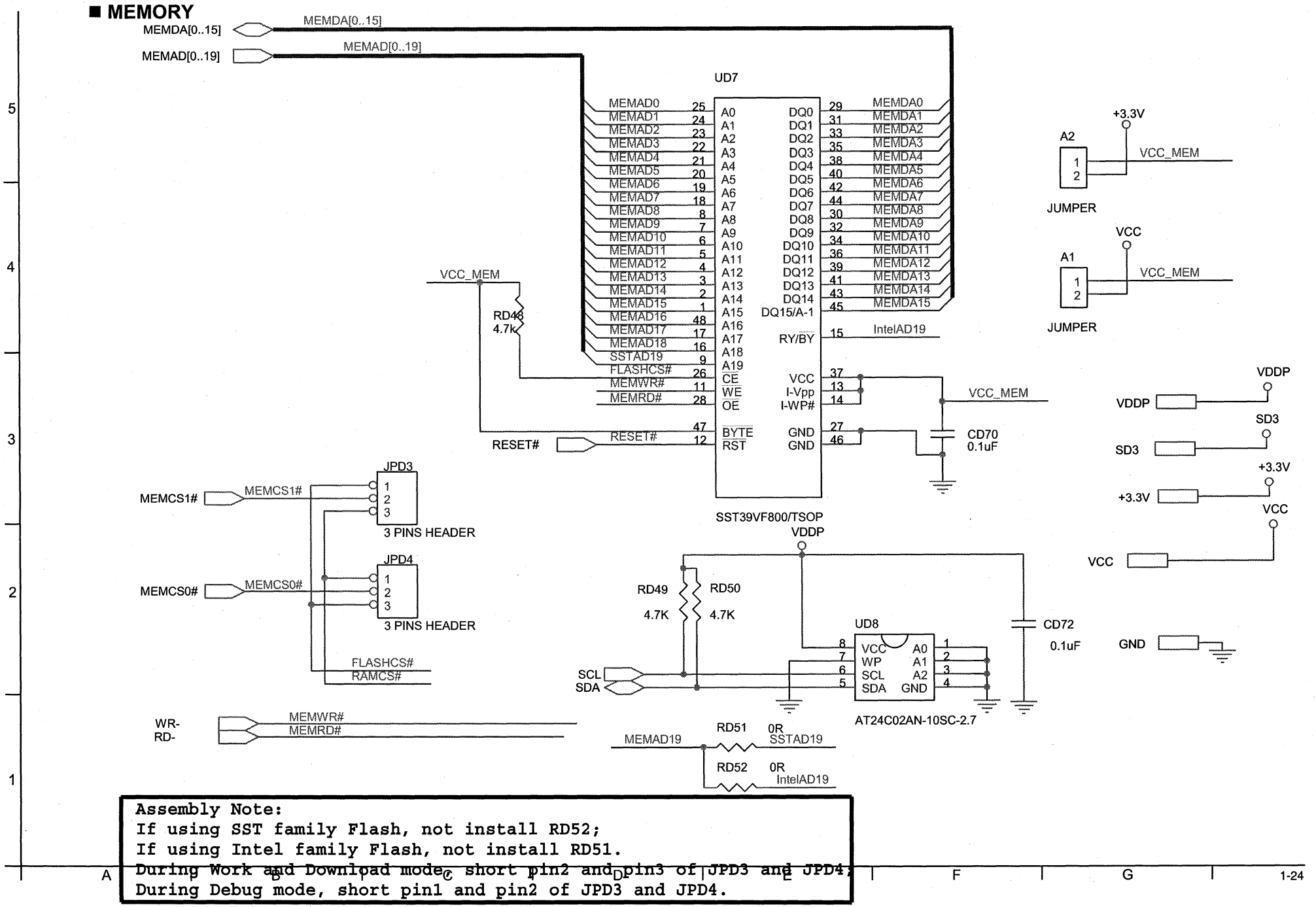
■ VADDIS 5E

UD5
VADDIS 5E

Assembly Note:

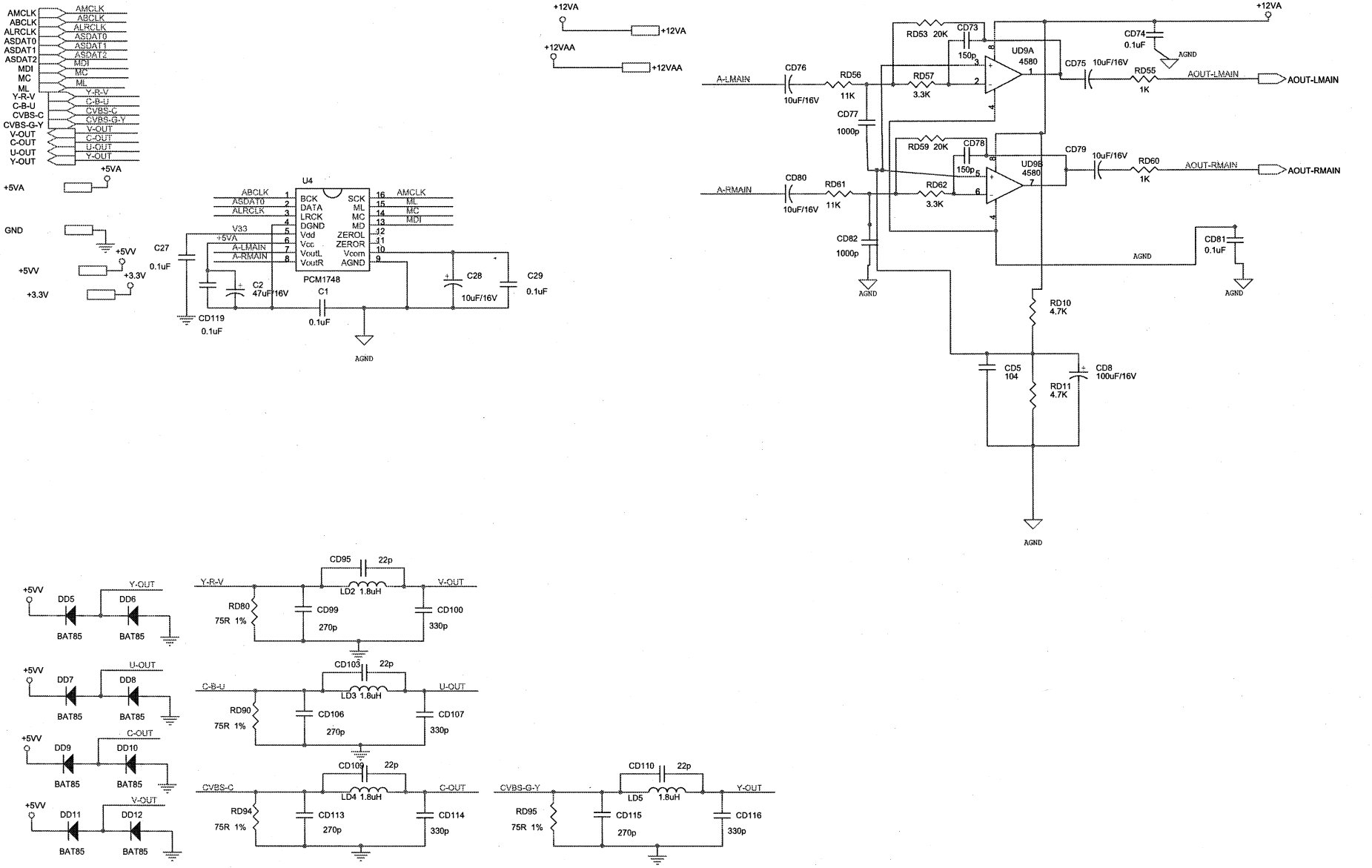
JPD1 SETUP:
Install short jumper during Debug mode.
Not install short jumper during Work and Download mode.
JPD2 SETUP:
Install short jumper during Download mode.
Not install short jumper during Work and Debug mode.

■ MEMORY

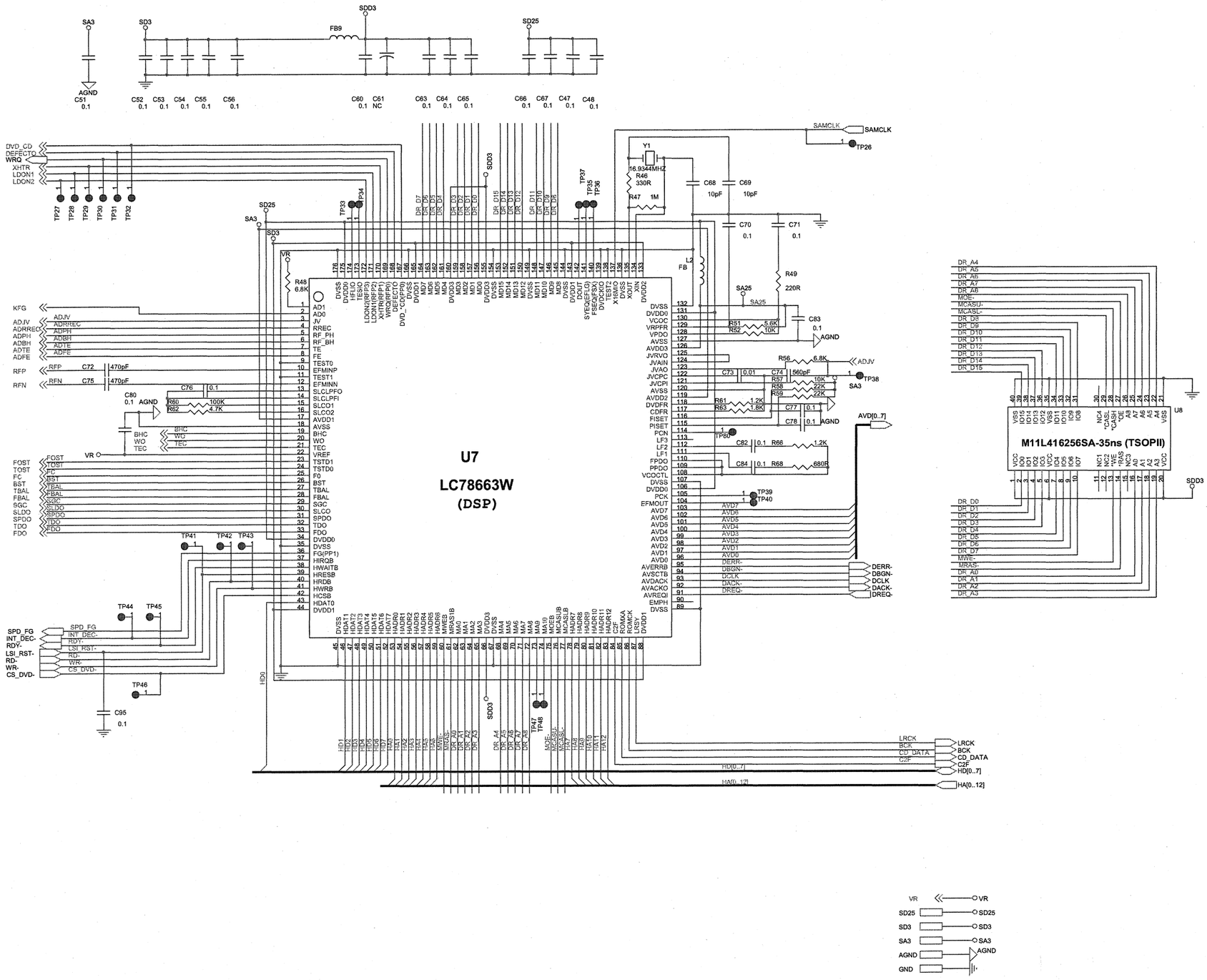


Assembly Note:
If using SST family Flash, not install RD52;
If using Intel family Flash, not install RD51.
During Work and Download mode, short pin2 and pin3 of JPD3 and JPD4;
During Debug mode, short pin1 and pin2 of JPD3 and JPD4.

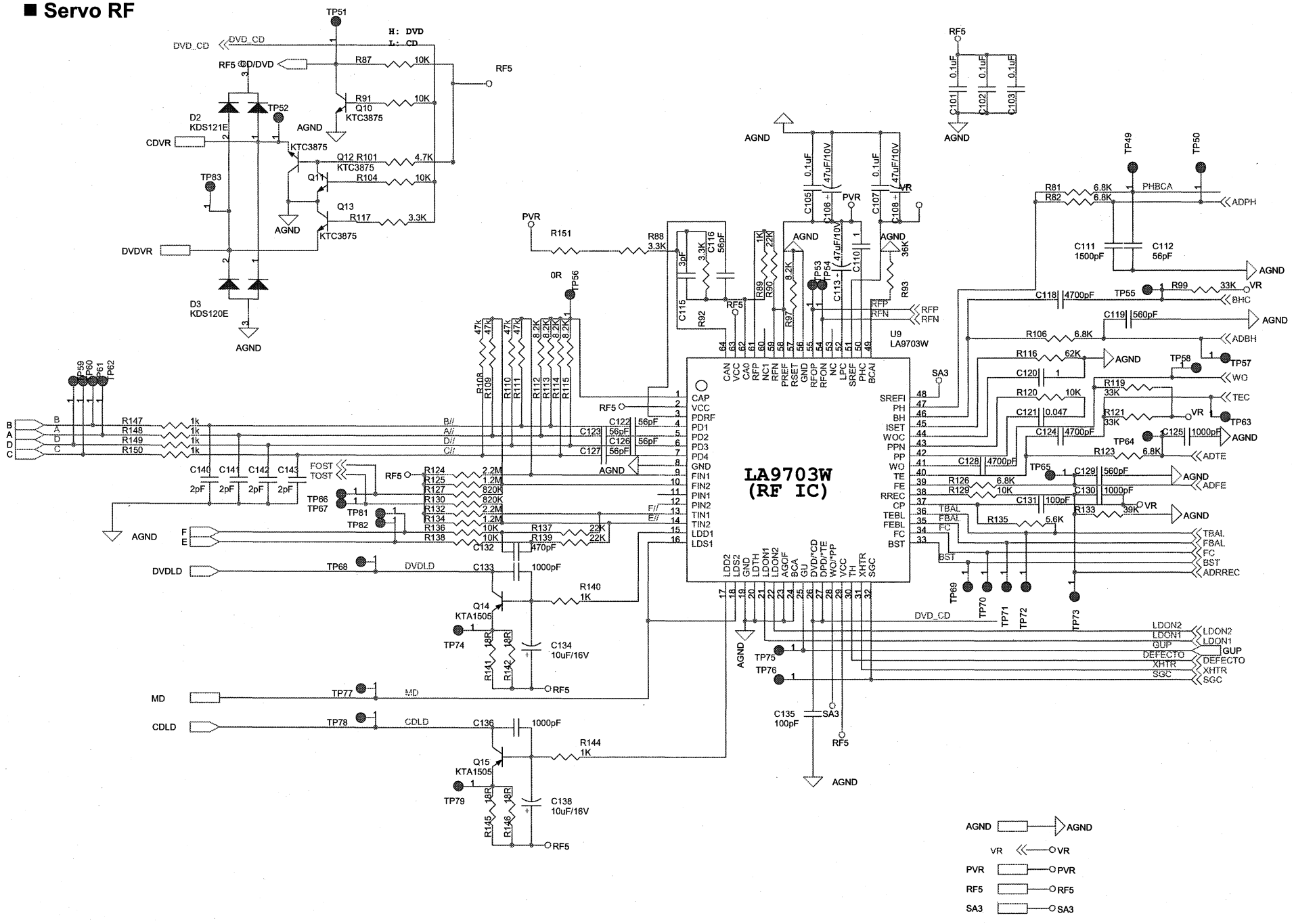
■ Audio DAC and Video Filter

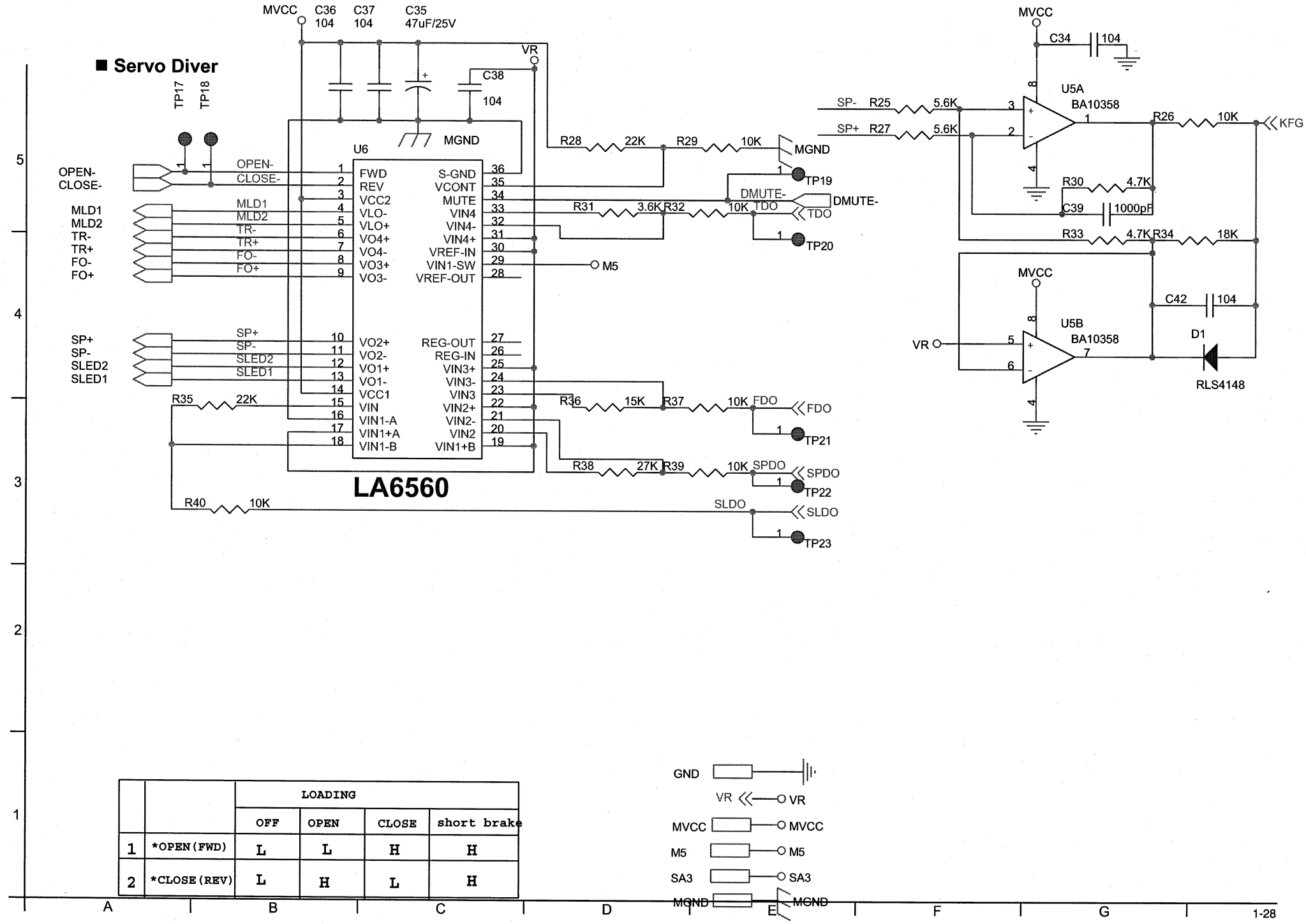


■ Servo DSP


U7
LC78663W
(DSP)
M11L416256SA-35ns (TSOPII)
U8
SA3
SD3
SDD3
SD25
AGND
FB9
SAMCLK
Y1
16.9344MHZ
R46 330R
R47 1M
C68 10pF
C69 10pF
C70 0.1
C71 0.1
R49 220R
C83 0.1
L2
FB
SA25
R48 6.8K
R51 5.6K
R52 10K
R56 6.8K
ADJV
TP38
C72 470pF
C75 470pF
C76 0.1
C80 0.1
R60 100K
R62 4.7K
C73 0.01
C74 560pF
R57 10K
R58 22K
R59 22K
R61 1.2K
R63 1.8K
C77 0.1
C78 0.1
AVD[0..7]
TP80
C82 0.1 R66 1.2K
C84 0.1 R68 680R
TP39
TP40
DERR-
DBGN-
DCLK
DACK-
DREQ-
VR
FOST
TOST
FC
BST
TBAL
FBAL
SGC
SLDO
SPDO
TDO
FDO
TP41
TP42
TP43
TP44
TP45
TP46
SPD_FG
INT_DEC-
RDY-
LSI_RST-
RD-
WR-
CS_DVD-
C95 0.1
HD[0..7]
HA[0..12]
LRCK
BCK
CD_DATA
C2F
TP27
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP35
TP36
TP37
DVD_CD
DEFECTO
WRQ
XHTR
LDON1
LDON2
KFG
ADJV
ADRREC
ADPH
ADBH
ADTE
ADFE
RFP
RFN
BHC
WO
TEC
VREF
F0
FBAL
SGC
SLCO
SPDO
TDO
FDO
DVDD0
DVSS
FG(PP1)
HIRQB
HWAITB
HRESB
HRDB
HWRB
HCSB
HDAT0
DVDD1
SAMCLK
TP26
DR_A4
DR_A5
DR_A6
DR_A7
DR_A8
MCE-
MCASU-
MCASL-
DR_D0
DR_D1
DR_D2
DR_D3
DR_D4
DR_D5
DR_D6
DR_D7
DR_D8
DR_D9
DR_D10
DR_D11
DR_D12
DR_D13
DR_D14
DR_D15
MWE-
MRAS-
DR_A0
DR_A1
DR_A2
DR_A3

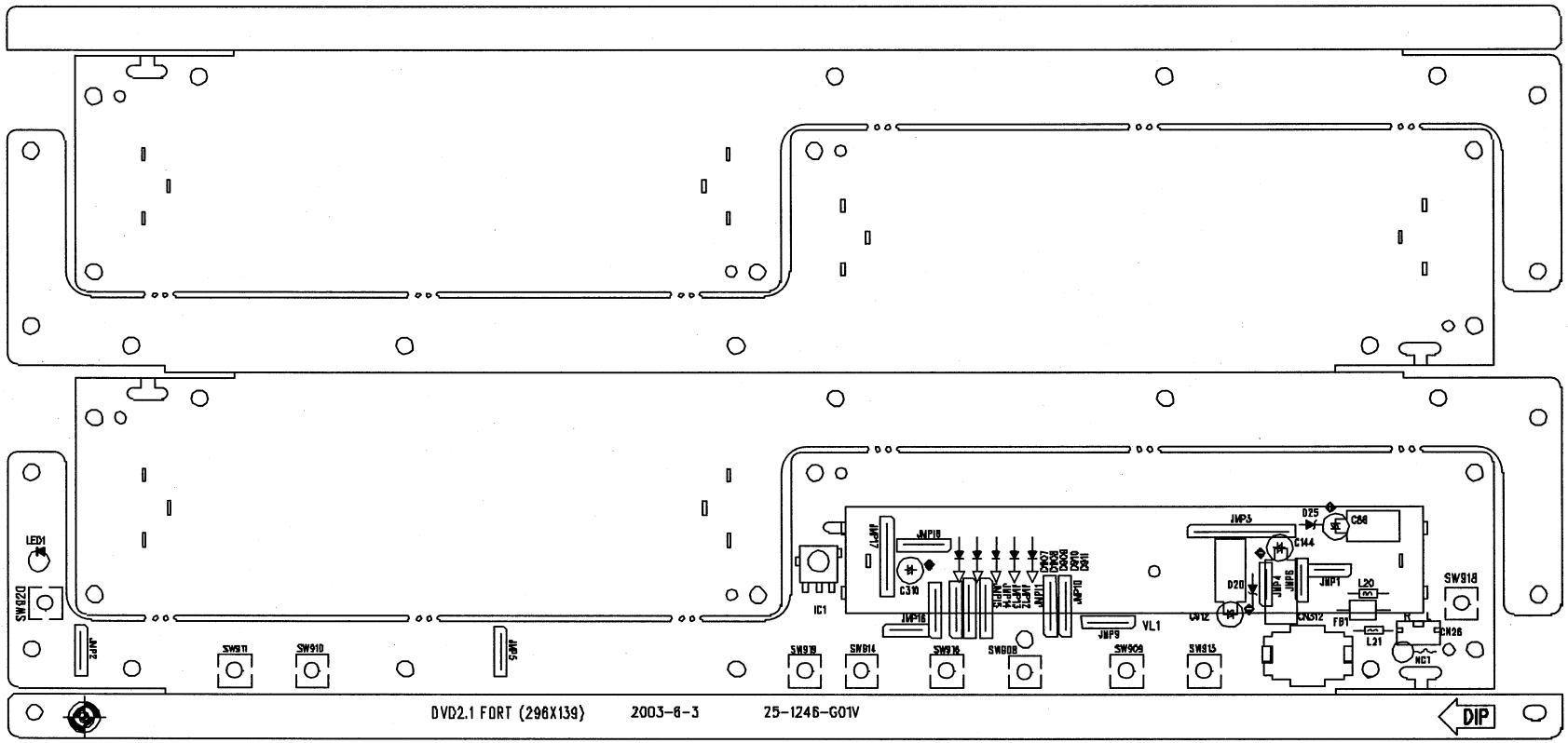
■ Servo RF


LA9703W
(RF IC)
U9
LA9703W
H: DVD
L: CD
DVD_CD
RF5 CD/DVD
CDVR
DVDVR
D2
KDS121E
D3
KDS120E
KTC3875
Q10
Q11
Q12 R101
Q13
R117
R104
R91
R87
10K
4.7K
3.3K
AGND
RF5
PVR
VR
R151
R88
3.3K
0R
TP56
R147
R148
R149
R150
1k
B//
A//
D//
C//
FOST
TOST
F//
E//
C140
C141
C142
C143
2pF
TP66
TP67
TP81
TP82
R124
R125
R127
R130
R132
R134
R136
R138
2.2M
1.2M
820K
10K
R137
R139
22K
C132
470pF
DVDLD
TP68
C133
1000pF
R140
1K
Q14
KTA1505
TP74
R141
R142
18R
C134
10uF/16V
MD
TP77
CDLD
TP78
C136
R144
Q15
TP79
R145
R146
C138
C135
100pF
SA3
R105
47uF/10V
C105
C106
C107
C108
C110
C113
C116
56pF
3pF
C115
R92
R89
R90
R97
R93
1K
22K
8.2K
36K
TP53
TP54
RFP
RFN
R108
R109
R110
R111
R112
R113
R114
R115
47k
C122
C123
C126
C127
56pF
CAP
VCC
PDRF
PD1
PD2
PD3
PD4
GND
FIN1
FIN2
PIN1
PIN2
TIN1
TIN2
LDD1
LDS1
CAN
VCC
CAO
RFP
NC1
RFN
PREF
RSET
GND
RFOP
RFON
NC
LPC
SREF
PHC
BCAI
LDD2
LDS2
GND
LDTH
LDON1
LDON2
AGOF
BCA
GU
DVD/*CD
DPD/*TE
WO/PP
VCC
TH
XHTR
SGC
SREFI
PH
BH
ISET
WOC
PPN
PP
WO
TE
FE
RREC
CP
TEBL
FEBL
FC
BST
TBAL
FBAL
ADRREC
DEFECTO
GUP
LDON1
LDON2
SGC
C101
C102
C103
0.1uF
TP49
TP50
R81
R82
6.8K
PHBCA
ADPH
C111
1500pF
C112
56pF
C118
4700pF
TP55
R99
33K
BHC
C119
560pF
R106
ADBH
R116
62K
TP58
TP57
WO
C120
R120
10K
TEC
C121
0.047
R119
R121
TP63
C124
C125
1000pF
TP64
R123
6.8K
ADTE
C128
TP65
C129
560pF
ADFE
R126
R129
C130
C131
100pF
R133
39K
R135
5.6K
TP69
TP70
TP71
TP72
TP73
TP75
TP76
TP59
TP60
TP61
TP62
TP51
TP52
TP83
AGND
VR
PVR
RF5
SA3

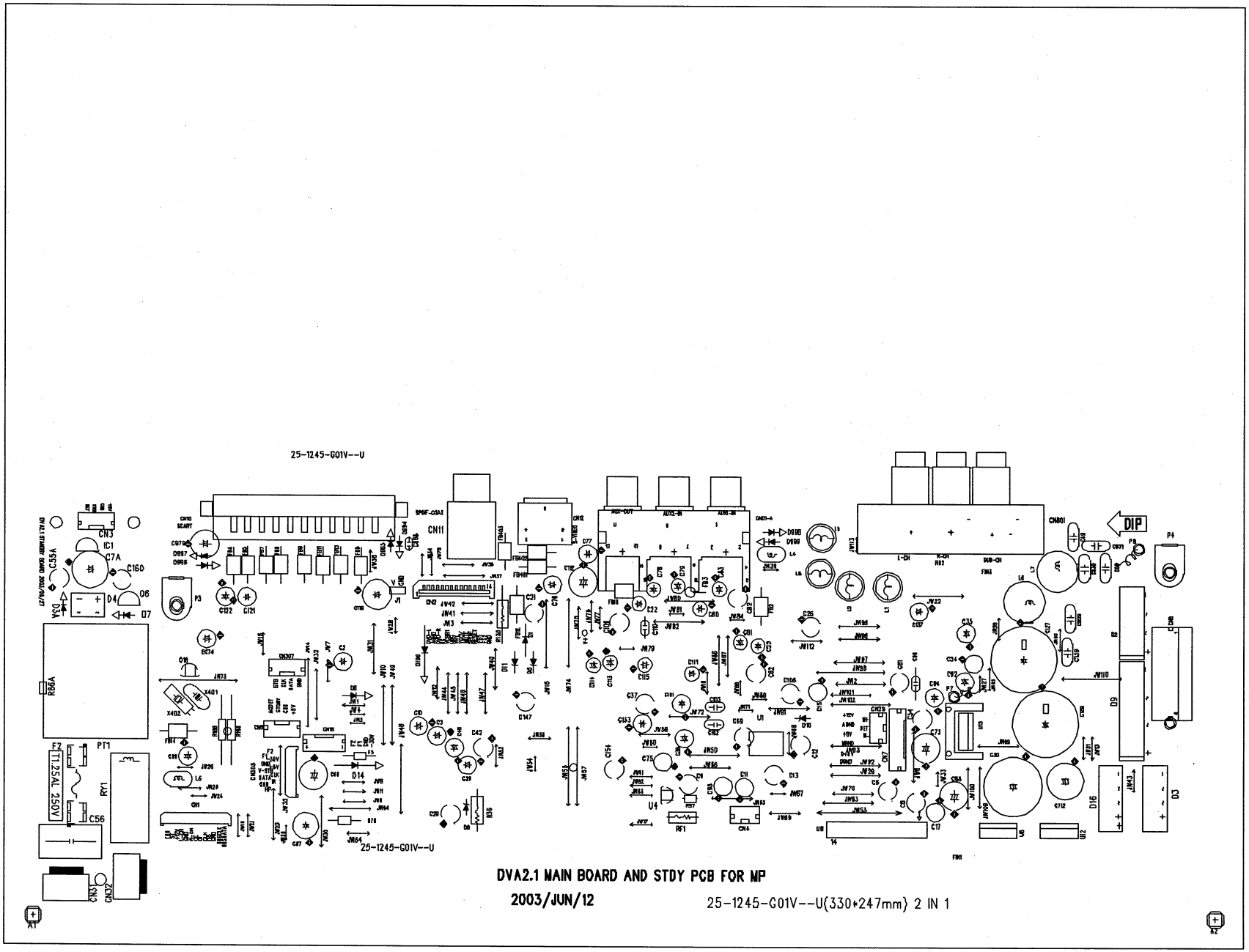


		LOADING			
		OFF	OPEN	CLOSE	short brake
1	*OPEN(FWD)	L	L	H	H
2	*CLOSE(REV)	L	H	L	H

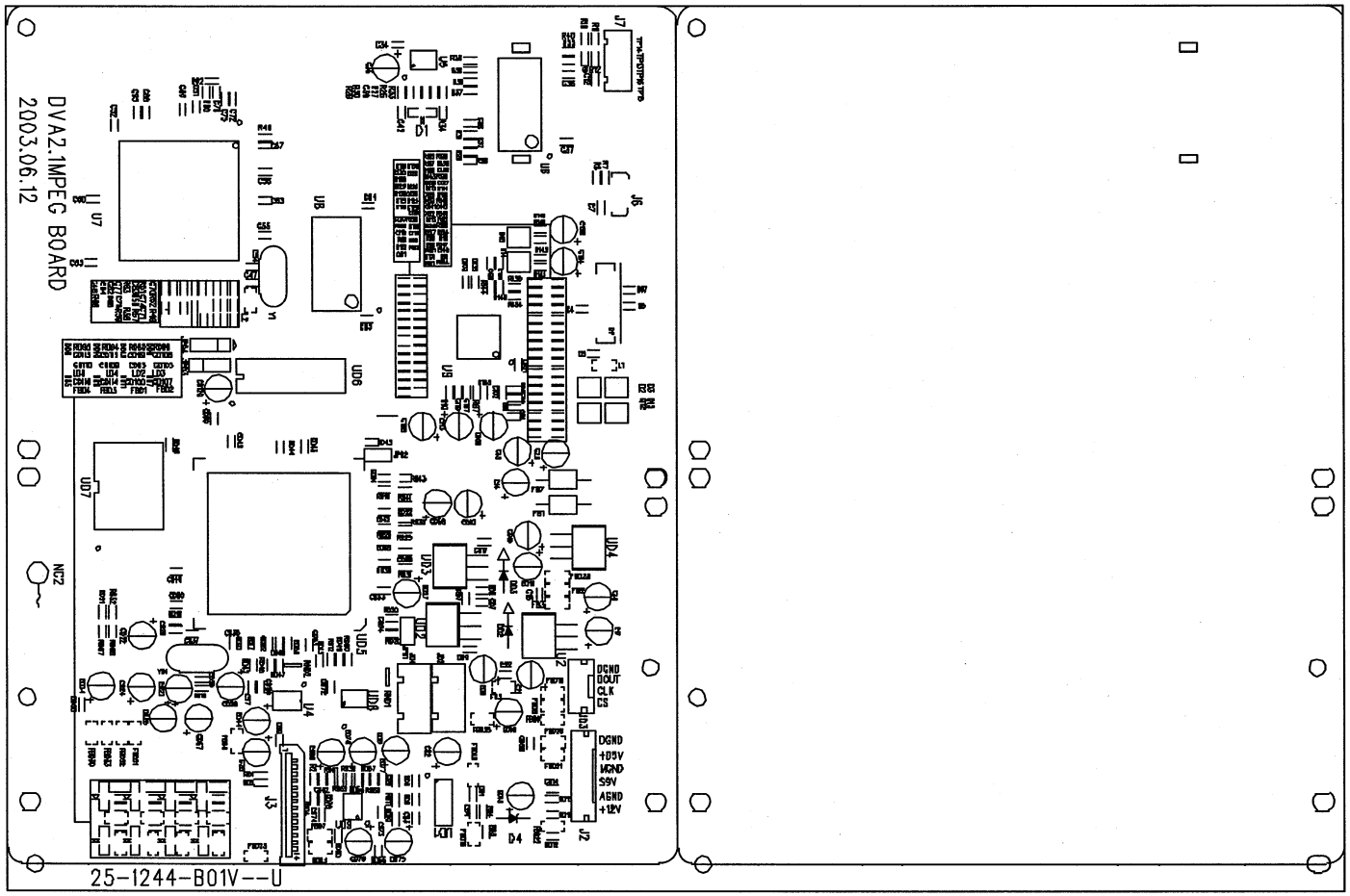
■ Parts loction



■ Main/Silkscreen - Top



■ Mpeg/Silkscreen - Top



PARTS LIST

[DVD-DR1039]

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Deck Mechanism Exploded view and parts list ..... 2 - 3
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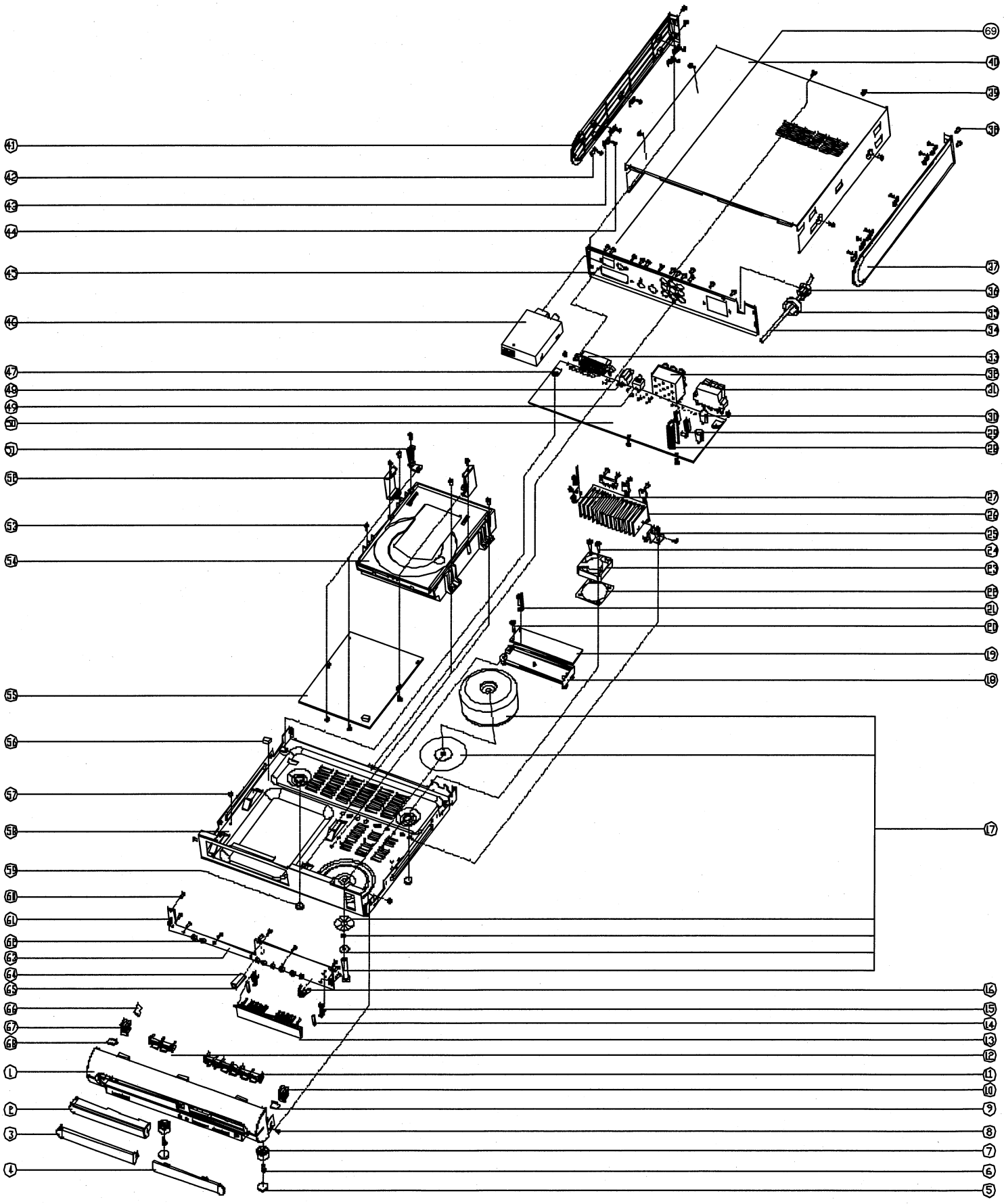
■ Exploded view of general assembly and parts list



Packing materials and accessories parts list